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An Interview With Ed Esber

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ISSUE NO. 35 SEPT. 1987
MICROTIMES

COVER STORY

50 Ashton-Tate: The View From The Top

An Interview with Ed Esber

By Jeff Spurrier

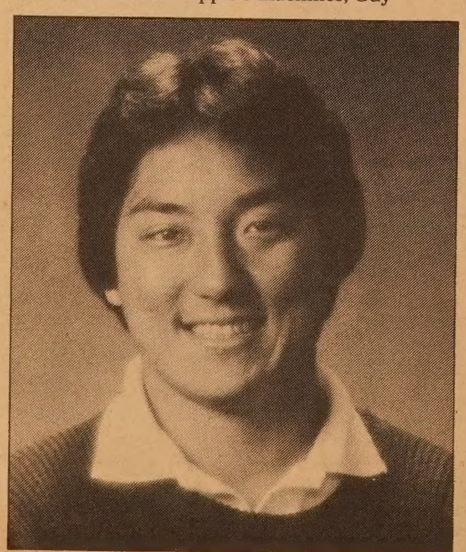
As the developer and publisher of bestselling database manager *dBASE*, Ashton-Tate enjoyed a meteoric rise from garage startup to prominence as one of the Big Three in the software marketplace. From the untimely death of its charismatic founder to mass departures of key executives to latter-day production delays and litigation over intellectual property, however, the company's also had more than its share of turbulence. In this interview, Ed Esber, the man at Ashton-Tate's helm, offers a candid assessment of the company's history, its current state, and directions for the future.

COVER AND CONTENTS PHOTOS: ANN SUMMA

46 Guy Kawasaki: Mac Databases Enter The 4th Dimension

By Mary Eisenhart

Last seen inducing third-party developers to write software for Apple's machines, Guy



Kawasaki now heads a new company, Acius Inc., whose first product is the *4th Dimension* database, aka the fabled *Silver Surfer.*

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By John C. Dvorak

In which the industry's most sardonic columnist holds forth on subjects of his own choosing.

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On connectivity in the corporate environment, and the relative strengths and weaknesses of IBM, DEC and Apple.

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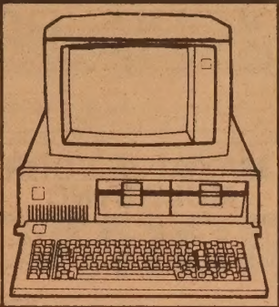

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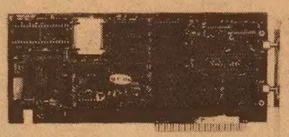

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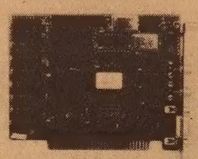

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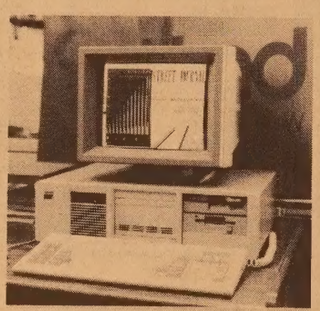

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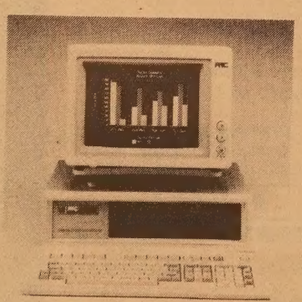

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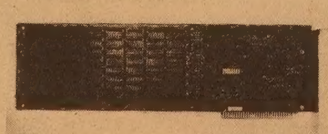

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This Vol. 4 No. 8, September 1987, Whole No. 35 MicroTimes, California's Computer Magazine, is published by BAM Publications, Inc., 5951 Canning St., Oakland, CA 94609. Phone (415) 652-3810. Los Angeles Office, 1800 N. Highland, Suite 220, Hollywood, CA 90028. Phone (213) 467-7878. San Jose Office, 36 Harold Ave., Suite 8, San Jose, CA 95117. Phone (408) 244-4400. Anaheim Office, 800 S. Brookhurst, Suite 1F, Anaheim, CA 92804. Phone (714) 776-2900. MicroTimes™ is

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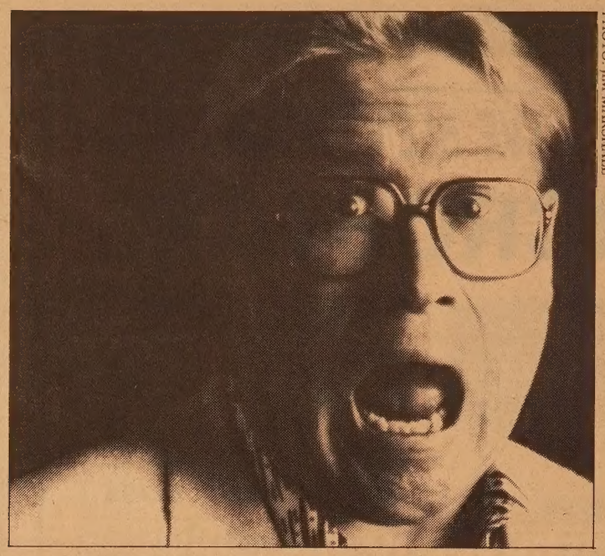

PHOTO: JIM MARSHALL

Dvorak Unleashed On Unsuspecting MicroTimes Readers! See last page.

Non-Stuffed Shirts For Dvorak

Thank you *MicroTimes!* I was beginning to think I was the only **micro user** with a **sense of humor.** That feeling developed as I continued to read **raps on John Dvorak.** Statements from readers (of a variety of publications) always seemed to discount him as a **nonsensical** writer; no place for him in a "sophisticated" publication; **childish or uninformed.**

I like Dvorak! I like his **style, his humor,** and I think there's a lot of room for it in the stuffed shirt world of computers. I've enjoyed his articles, regardless of publication, and delighted in seeing him on your **cover** (July '87) with the accompanying interview.

Oh, and by the way ... tell John I'm a **PC user.**

Jim Edwards
La Crescenta

Software Pirates Beware

Westlake Data Corporation offers a $2,000.00 reward to any individual who provides information leading to the apprehension and indictment of anyone responsible for placing *PathMinder* or any other Westlake Data software product on a computer bulletin board for downloading. No Westlake Data software product is now or ever has been Freeware or Shareware. Anyone who has information about any bulletin board offering the ability to download *PathMinder* or any other Westlake Data software is urged to call and write Westlake Data. Contact Dick Hodgkins, President or Frank Tantalo, Vice-president and General Manager. Phone number: (512) 328-1041. P.O. Box 1711, Austin, TX 78767.

Westlake Data urgently requests *MicroTimes* that this reward notice be given immediate attention and prominent notice in publication. This industry must begin to clean up its act. The enemy this time is not foreign. Westlake Data has for three years produced highly rated products at reasonable prices without the burden of being copy protected. It is time that the abuses of such pirating be stamped out.

F.P. Tantalo
Vice-President
Westlake Data Corporation
Austin, TX

Another Hacker For UNIX

Bennett Falk's column "The Hapless User's Tale" [July NC/August SC] is a wonderful exposition of what some of us like about UNIX (and others hate). UNIX is suited to the hacker mentality, which is mainly interested in seeing if something can be done and how quickly or in how short a series of commands.

Which is not to say UNIX isn't useful. It is so useful that there's just no comparison with things like MS-DOS. But the playful, exploratory attitude it encourages isn't apparently for everyone, and probably turns off a lot of business people. Which is one reason why all the MS-DOS folk are looking down the street waiting for the OS/2 bus to finally arrive, and ignoring the 100-story UNIX skyscraper right next to them.

Harry Henderson
The WELL

MicroTimes Opens The Portals Of Knowledge

Often I get mail from our users about things they have heard about or seen which relate to us and The Portal System™. We have an interesting and loyal user base, and your recent article about us in *MicroTimes* has touched our users, as well as significantly increased the general public interest in Portal.

The following remark, which I clipped from a letter sent to me by one of our users, shows some of the response we've been getting:

"Hey Phil ... The *MicroTimes* article on Portal was real good. I think it will give you and John some good exposure. It explained some things about the system that I didn't know."

(John is John Little, co-founder with myself.)

I think this shows the quality of your publication and of the writing by Corinne Cullen Hawkins. You have managed to show something new to one of our existing users! I guess that's just one of the reasons I continue to look forward to my next issue of *MicroTimes*. (One of the few industry publications I actually still enjoy.)

Phil Sih
Portal Communications Company
Cupertino

Readers interested in more information about The Portal System are invited to call 408/973-9111 voice, 408/725-0561 data 300/1200, 408/725-0569 data 2400.

— eds.

Jaded Gamers, Take Heart

I read with interest your recent interview of John Dvorak. In the article, Mr. Dvorak mentioned an apparent lack of new ideas in the computer gaming market. Perhaps this is a consequence of having not heard of the game of *Core War.*

Far from the shoot-em up alien massacres and longwinded poetic monologues, *Core War* is a first class game requiring the highest quality play. Only one person is required to play, although competition makes the action more fun. To play *Core War,* a person must first write a program, called a Warrior, in an assembler language called Redcode. The warrior is then assembled and contested against another warrior, which is also assembled. The players then sit back, relax, and watch the game as it plays. The players, looking at the graphic display of their favorite computer, see the effects of their warriors. In the display are color changes, pixel by pixel, mapping the locations of memory accessed by the warriors, each warrior denoted by a different color. In the current standard, only two warriors battle at a time, and only in a space between 1K and 8K instructions in size. Redcode is an imaginary assembler language supported through the use of simulation systems. The beauty of *Core War* is that it may be transported to any Turing machine.

While the above description is accurate and complete, perhaps you'll find the enclosed issue of The Core War Newsletter to be helpful. The newsletter is printed quarterly and distributed to the nearly 150 subscribers worldwide. As well as providing a means of communication amongst Core War enthusiasts, The Core War Newsletter acts as the official publication of the International Core Wars Society. In this capacity, the newsletter keeps society members informed of society business and activities.

William R. Buckley
Publisher, The Core War Newsletter
Huntington Beach

Prospective Core War enthusiasts are invited to write Mr. Buckley at AMRAN, 5712 Kern Drive, Huntington Beach, CA 92649.

— eds

Corrections

MicroTimes ran an ad on page 60 of the June issue for The Computer Store in Mountain View which did not include the company name and address. The AT Look Alike for $949 and the XT Turbo for $499 are products for The Computer Store, not Computer Graphics Center, Inc. We sincerely apologize to anyone who was inconvenienced by this error.

In the article on the CD-ROM conference in the same issue, there were several inaccuracies in the discussion of the Visual Dictionary CD-ROM application under development for Editions Quebec/Amerique-Facts On File, which have been brought to our attention by Carolyn Kuhn, the project manager. The prototype was developed in five months, not five years; the size of the prototype is 72 megabytes; and the production edition of the CD-ROM will include 1,000 images with over 10,000 terms in French, English and Spanish.

Also, contrary to what we reported, the CD-ROM is still in the prototype stage; the book version has sold over 100,000 copies. Finally, the Department of Education has not been involved in the project; the client is Editions Quebec/Amerique-Facts On File. For further information on this project, please contact Carolyn Kuhn at Software Mart, Inc., (512) 346-7887 for further information.

In the same issue, in a Buyers Guide mention of *If/then,* an AI instructional package using *Lotus 1-2-3,* the phone number of If/then Solutions, the product's publisher, should have been (415) 346-5886, not 346-5885.

Also, notwithstanding references to version 1.5 of *VP-Planner* in our July NC/August SC issue, the current version is actually 1.35. Thanks to Janet Walden of Paperback Software (415/644-2116) for showing us the error of our ways.

We extend our heartfelt apologies to those who have been inconvenienced by these errors. *— eds.*

Letters are heartily encouraged. Send electronic mail to **microx** *on The WELL, (415) 332-6106. Send US Mail to 5951 Canning Street, Oakland, CA 94609. Please include your real name and the city where you live. Anonymous letters will not be printed.*

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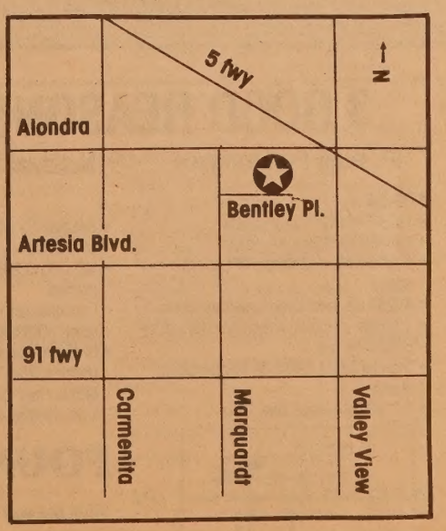

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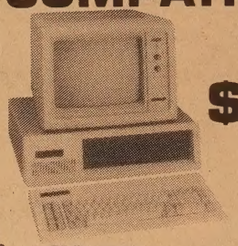

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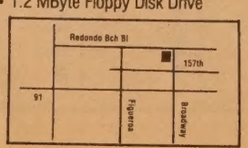

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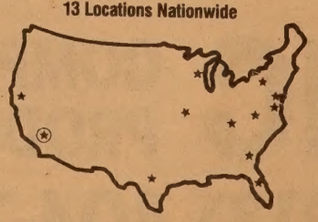

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August 15 Computer Swap. Pasadena Center, Pasadena CA. Call Microshows (800) 433-7469 for information.

August 15 San Bernardino Computer Sale And Show. National Orange Show Grounds. Contact Golden Gate Shows (415) 388-8893.

August 18-21 Data Transportation and Protection. Embassy Suites, El Segundo. Call (213) 825-1047 for registration information.

August 22 Computer Swap. Orange County Fairgrounds, Costa Mesa. Call Computer Swap Inc., (800) 252-SWAP for information.

August 24-28 Computer and Network Security: Technical Orientation. UCLA Extension. Call (213) 825-1047 for registration information.

August 27-28 Computer and Network Security: Managerial Orientation. UCLA Extension. Call (213) 825-1047 for registration information.

August 29 Computer Swap. LA County Fairgrounds, Pomona. Call Computer Swap Inc., (800) 252-SWAP for information.

August 29-30 Soft Teach: The Computer Products Training Forum. Los Angeles at the Sheraton Plaza Reina Hotel. Contact Softsel (800) 325-9189

September 14-19 Engineering And Management Program. UCLA Campus. Contact the UCLA Extension Department of Engineering and Science, P.O. Box 24901, Los Angeles, CA 90024. (213) 825-3858.

September 19 Computer Show. CSUN North Campus, Northridge, CA. Contact Microshows (800) 433-7469.

September 19 Computer Swap. Orange County Fairgrounds, Costa Mesa. Call Computer Swap Inc.,(800) 252-SWAP for information.

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October 10 Computer Swap. LA County Fairgrounds, Pomona. Call Computer Swap Inc., (800) 252-SWAP for information.

October 13-16 Computer Science Engineering Short Courses. UCLA Campus. Contact the UCLA Extension Department of Engineering and Science, P.O. Box 24901, Los Angeles, CA 90024. (213) 825-3858.

October 21-23 IFIP International Conference On Computers And The Law. Santa Monica. Contact Michael M. Krieger (213) 208-2461 or J.J. Buck BloomBecker (213) 850-0509.

As a community service, MicroTimes lists trade shows, seminars, and other special events in the Calendar of Events free of charge on a space-available basis. To improve the likelihood of your listing's timely inclusion, please make sure we have the necessary information no later than the first of the month two months before the cover date of the issue in which you'd like it to appear (i.e. the deadline for the December issue, on the street in November, is October 1). Send to: MicroTimes Calendar of Events, 5951 Canning St., Oakland, CA 94609.

News about user group meetings and other regularly scheduled activities should be sent to User Group Network at the same address.

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BUT JAN LEWIS SAYS . . .

Interview

Apple's Peter Hirshberg On Connectivity

Peter Hirshberg is marketing manager of desktop communications for Apple Computer, Inc.

What do you see as the most important issue in this whole area of connectivity using Macs, IBMs, DECs—the major environments in the business market today?
The biggest issue is how to allow that end user at his personal computer the ability to transparently get information from wherever it happens to be, in a Mac, an IBM host, a DEC, or Wang—and then use the best software to do something with it. We have a lot of systems that either can't communicate, or they can but the interface changes, the ability to bring things into applications to get something done is confusing. So, we have probably a lot of ground to go to really merge environments and let people transparently get work done without being flummoxed by the fact that every time you try to go somewhere else for information, all the commands change, and you have to go through a whole bunch of modes to move stuff from one place to another.

It seems as though Apple is the one that's on the defensive—that has to give its users what Sculley has referred to as "no penalty for having chosen a Macintosh." What's your feeling on that?
Everybody is off struggling with this problem right now. These days the player who wins is the person who allows the end user to talk to a range of environments as easily as possible. So [to say that] Apple [is] on the defense is wrong. Rather, it's a key opportunity we're all responding to. The other thing is that the coprocessor cards that exist are nice, but that's not really our strategic direction, which is to make certain that applications on the Mac can read and write IBM files, that an *Excel* or *Jazz* can talk to a *1-2-3*, or that *Word* or *MacWrite* or *WriteNow* can talk to *Word* or *MultiMate* or *WordStar* on the IBM side. That the various databases can exchange data. Because the real future is not a Mac running someone else's operating system. That should be an option within the broader rubric of a Macintosh, transparently existing on a network. Apple has probably gone the furthest at making work group computing a reality.

In the IBM arena, there are a lot of standalone machines, there are servers that are principally used for shared access to disks or shared peripherals. In the Mac environment, AppleTalk is ubiquitous. There are servers out there now, such as *TOPS* and our own *AppleShare*, that are so transparent to use that people can just work together on documents at the same time, or move stuff back and forth, and we want to extend that to IBM PCs, whether an IBM PC is on our own network, or whether a Macintosh is participating on a 3Server or ultimately a Novell network or something else.

So, we see a real opportunity to make our machine the desktop workstation of choice that can transparently move about in a bunch of environments. For example, right now, a Macintosh that does something as simple as 3278 emulation can simultaneously be on with the terminal and have *Excel* launched, and because you can cut from the host and paste it into *Excel* in real time, you can integrate information from both environments.

You can cut and paste between those environments. What format do they have to have to cut and paste in, and how aware does each of the programs have to be of the other one?
They don't have to be. Because it's part of the Macintosh architecture. The Macintosh architecture from the start said that first of all, all Macintosh applications, because they're all built on the Apple communications framework, can share information today, because they're intelligent enough, and aware of each other that if you highlight and copy from one application and paste

Jan Lewis is a well-known industry analyst and president of the Palo Alto Research Group, a consulting firm for the microcomputer industry. This article has been reprinted with permission from Computer Insider, *PARG's newsletter.*

QUESTION: What do you see as the role of the Mac in existing computing environments (IBM and DEC)?

"Apple is a viable alternative to MS-DOS. Additionally, the Mac family (which are the only Apples we sell) provides us with a level of transparency that's very appealing to corporate customers."

Steve Hawley
Business Line Manager, Apple Products
PacTel InfoSystems

"I see an increased role of mixed environments, that is, of IBM, DEC and Mac. I see the Mac being specialized to higher bandwidth applications—those that are best handled by its graphics-intensive user interface. Because of this, our company is introducing in July its second Mac product [3+ for the Macintosh] that networks it with the DOS and IBM world."

Bob Metcalfe
Chairman and Ethernet inventor
3Com

"[Apple] recently invested in Touch mainly because we're about to bring to market a product that gives transparent connectivity between the Mac and the VAX and the PC family of products in each direction. I think we'll give Sun a good run for their money."

Bill Fello
CEO and President
Touch Communications, Inc.

"A year and a half ago, we had two Macs in the house and it was a nuisance because we couldn't network them and yet people liked them so well for generating documents. People are getting the Macs because of their friendliness."

C. Richard Moore
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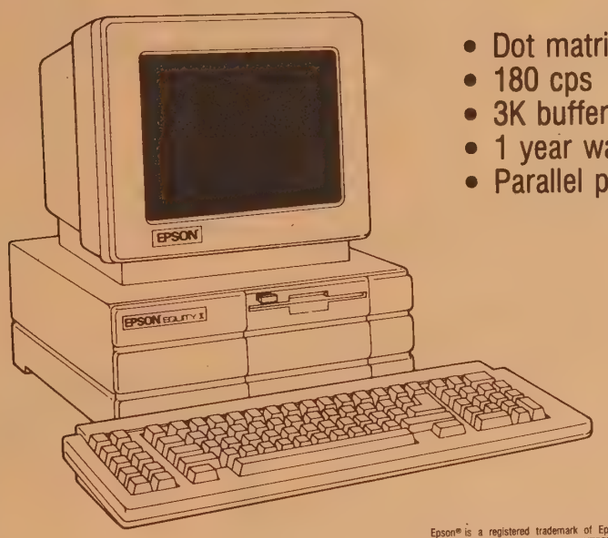

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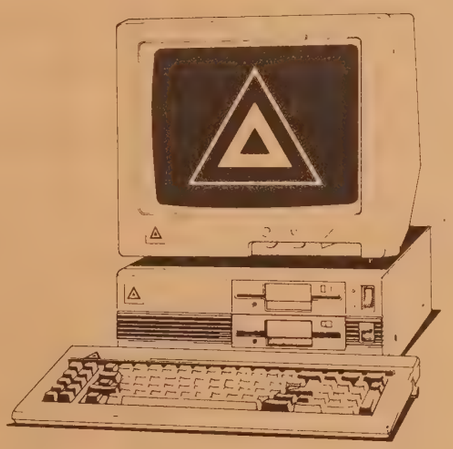

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into another, they all know how to handle text. In some of the more impressive demos we've done, for example, we've had a Macintosh that's been logged onto a 3278, and with *Switcher*, which lets you have three applications, you can switch between applications. They're not multitasking, but they're all launched, and you just push a button and one pops up, and then you push an arrow, and the next one pops up. And you can basically be onto a host, copy information from the host, go into *Excel* and paste it. And *Excel* can read *1-2-3*, and then take information from another Macintosh that it's getting through an AppleShare server or Apple electronic mail program, and integrate it all together. So, given the architecture of the Mac, where you've got something that was initially built for Mac applications alone—that, is the fact that applications could share information—as you move into a communications environment, suddenly you have this situation where every host acts differently and commands are all different, and it's difficult to move information and file transfer around. The architecture of the Mac really allows for that in a much more facile manner than other systems. From the start it makes the Mac a very strong communications workstation.

Let's get to the mechanics of the 1-2-3 on the PC to the Excel. Somebody did some additional work.
On the file translation side. Neither *Lotus* nor *Excel* did any work to move the data from point A to point B. Then the question comes, "Who's going to do the work to move it back and forth?" Bill Sadleir [of Dayna Communications] comes up and says, "I'll give you a 5¼ inch drive that we can hook to a Macintosh, and if you put your *1-2-3* data disk in that, voila! *Excel* will just look at it like another Mac disk and bring the data in."

And Nat Goldhaber [of Centram Systems] says, "Instead of buying extra disk drives, if you've got IBMs and Macs in the same office, just put them on our network and everybody will see everybody's disk as an available drive, if you've given it the appropriate security. And we can just open the thing up and go at will." And then we come along with 3270 file transfer products and say, "If you're a big company and you've got a 4300 somewhere and you're running TSO, you can send it up to TSO and bring it down. Which is, in big companies, how they often do it." We also just did *Desktop Express* with MCI-Mail, which allows you to move full binary files and graphics from any Mac to any Mac, and it's compatible with *Lotus Express*. So if you had an IBM and I had a Mac, and you had *Lotus Express* for MCI-Mail and I had *Desktop Express*, we could move this stuff over MCI-Mail transparently.

And then Ash Jain [of AST] comes along and says, "You could turn your Mac into a PC," and there's another one. Finally, we've got *AppleShare*, and there are now products such as Tangent Technology's product that puts an IBM PC on our server. So there are many solutions; there are just a huge number of ways of moving data back and forth that really mirror the very robust expansion of host communications networking. The issue of moving it from point A to point B is, from where I sit, almost moot. From where you and the rest of the industry sit, until we talk about it and it's generally accepted, it's something that everyone has to keep asking to figure out what's where. But there's lots and lots of ways of moving stuff back and forth today, and there are going to be more.

The real future is not a Mac running someone else's operating system.

Let's say I want to go from PageMaker IBM to PageMaker Macintosh. How do I do this?
If I had a Mac and a PC in the same office, I'd just go out and buy *MacLink Plus* for a hundred and some odd bucks, which comes with a cable and a disk that you put in both machines. It's the simplest way of doing it. You stick the two machines next to each other. There's a cable, and one end of the cable plugs into the serial port of the Mac, and you put a disk in each thing, and you just send the stuff back and forth. Obviously the applications on both sides must have either the same file format, or the ability to translate from one file format to another. In the case of graphic documents, there aren't a lot of ways of going back and forth now. In general, if you create something in *MacDraw*, there's no way right now of displaying it in the PC, because there's really no equivalent to *MacDraw* on the PC. When the IBM universe stabilizes more, you'll probably see a lot more translation.

The most important thing is that the data from one application should be able to be read by the data from another application, and shared. This is something that's basically licked in the text and the spreadsheet arena. In the case of a graphic document like a *PageMaker* document, if the thing's in PostScript, you can get it from a PC and print it onto a laser printer right away.

The one area that is not as strong right now is creating a graphic document on the PC and sending it to the Mac to be viewed. Because at the moment, while we would like to see *PageMaker Mac* and *PageMaker PC* share full graphic documents, it's probably the least necessary thing. What most people are going to be doing is using desktop publishing, probably on the Mac side, and creating data elsewhere, and then printing it out. If they're doing desktop publishing on the PC side, then they're not going to be able to send that final document to a Mac until the two products can support all the same graphics. And although they will be able to take advantage of a LaserWriter, we've been actively encouraging developers to get their products to read files on either side. And we've developed Apple File Exchange, which is a tool to accommodate that.

Starting with the shipment of the Apple 5¼-inch PC drive in the very near future, the Mac operating system will be extended to include Apple File Exchange, which does application file translation from one environment to another, and this is a shell under which you put various translator pairs. The very first one we'll be providing is IBM's DCA, Document Content Architecture. A third party will be announcing, at the same time, a whole bunch of translation pairs, including the *WordStar* and *MultiMate* and *dBASE* data to the appropriate things on the Mac side. So, we've built into the operating system the "hooks," if you will, to accommodate this. Then either developers or other third parties must build file translation pairs that accomplish these things.

PageMaker-to-PageMaker is a specific instance and it's Aldus's responsibility. They've said they're going to do it, and I can't tell you how far along they are. And Apple itself can't take the responsibility of making the two work together, although we think we're building an enormous market for those things to share stuff transparently. It looks like that's exactly the direction that developers are going in. □

We see an opportunity to make our machine the desktop workstation of choice.

Commentary:

Big Blue, Baby Mac, And The Holy Host

Just about the time that Apple was selling its millionth Macintosh and introducing its new lines of open Macs—just about the time that Digital Equipment Corp. (DEC) was enjoying a resurgence due largely to a cohesive mid-range strategy and IBM was experiencing a slump due in part to the lack of a cohesive mid-range strategy—we started noticing a need to share data and applications between Macs and PCs. So did lots of other computer users, and activity in that area really started cooking.

Which is funny, because initially the Mac was perceived as less than a "serious" computer. In spite of that, the Mac had found a snug berth in the business environment, largely because of the desktop publishing capabilities of Apple's LaserWriter and its associated software. But while the Mac may have gotten into the office via the trojan niche of Desktop Publishing, the data to be published had to come from lots of places within and outside the organization.

Now think about the problem. Say you're a business putting out a newsletter. You have a designer working on setting up the *PageMaker* file while a writer composes the text and someone else draws the graphics. You could not take it for granted that you would ever be able to actually integrate all three pieces of work in one machine or onto one laser printer. Or you're a Macintosh user and someone gives you an important document to review on a vanilla IBM *WordStar* disk. What do you do?

Apple's CEO and Board Chairman John Sculley said there should be no penalty for using a Macintosh. Well, if you're sitting there trying to get an IBM *WordStar* disk into your Macintosh for processing, and you can't do it, that's a penalty. Seemingly simple problems like getting LaserWriter output from a PC required kludges and workarounds. (Workarounds like reentering the data, for instance...)

The workarounds led naturally to commercial solutions. A whole range of solutions appeared, from transferring bits over serial cable to application sharing at the Local Area Network level, from hooking a 5¼-inch drive with some application filters onto your Mac to turning your Mac into a clone. Products appeared which not only bridged the gap between Mac and PC, but provided capabilities that you couldn't even think of in a standalone user environment. Odesta Corp.'s *Helix*, for instance, provides a database that's truly distributed over Macs, IBMs and DEC VAXes. Think Technologies, Inc. provides *In-Box*, which is a full messaging system between Macs and PCs.

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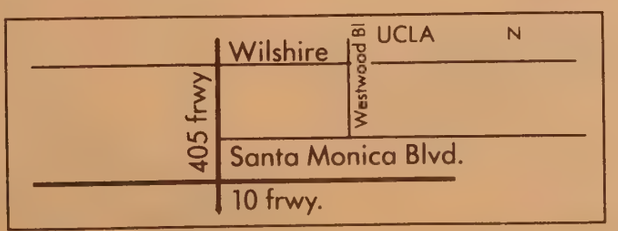

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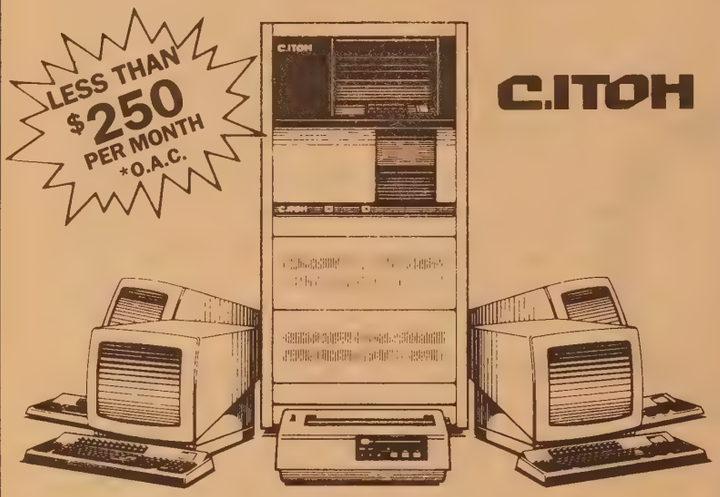

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Desktop Express for the Macintosh and *Lotus Express* for the PC transfer applications, bit-maps, or any full binary file via MCI host computers. Additionally, connectivity to hosts and the corporate backbone, usually DEC or IBM, has started taking on more importance.

This recent emphasis on Mac/IBM/DEC connectivity is not only a manifestation of present need but an indicator of products, solutions, and opportunities yet to come. Recent history of the three significant operating environments in the business market helps explain why we are seeing this need expressed now and exactly what it means to end users and to the industry.

In 1981 IBM announced its open-architecture, low-risk entry into entry-level systems. The IBM PC's dominance was reinforced by the failure of DEC's poorly designed Rainbow 100. With the emphasis—and growth—at the desktop level, DEC itself was perceived as a flop, despite the success of the growing VAX family. Within a couple of years, Apple was introducing the first Macintosh. It was a cute, seductive machine. It was not taken seriously, however, because of its slow speed, insufficient memory, and shortfall in the software area.

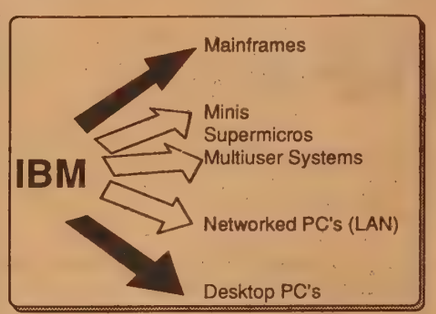
But the Mac expanded and evolved, software and third party vendors jumped into the market, and users and uses of the Mac continued to increase. The proliferation of the desktop computer drove home to everyone the need to make incompatible systems communicate with one another.

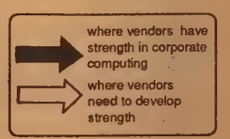
In an exclusive interview with *Jan Lewis' Computer Insider* nearly a year and a half ago, John Sculley revealed his vision of the future. "We must reduce the risk of buying Apple's products by having really good connectivity. We must increase the reward for buying Apple products by having a family of workstations that can connect up to a range of host computers as well as operating with their own work group. That's the approach we're taking. Our goal is to make the issue of MS-DOS compatibility a non-issue."

If Sculley's vision holds true, we'll see the day when users will decide which computer to buy based not on what is most compatible with the organization's existing computers, but on what is the best box for the individual user. The tower of computer babble may never be demolished completely, but at this rate MS-DOS compatibility is quickly becoming a non-issue. □

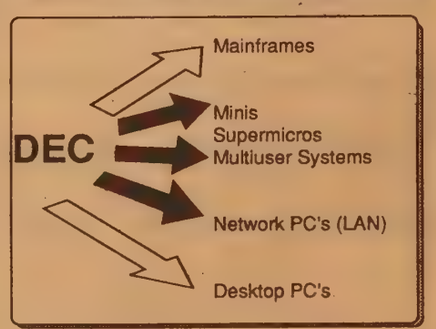
CORPORATE COMPUTING: A CASE OF SHARED CUSTODY

Vendors are playing connect-the-dots among these three corporate computing environments.

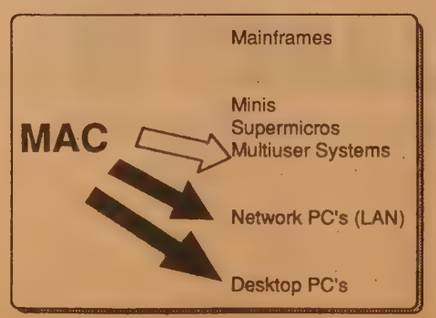




IBM owns the mainframe and micro levels, but is still floundering in the mid-range.



DEC is strong in the mid-range, but for strategic reasons must expand the product line into the high-end, and for defensive reasons must gain more of a presence at the desktop level.



Apple's Macintosh family is strong at the desktop and networked work group level, but needs to expand into the mid-range or offer Mac users a way to connect at that level.

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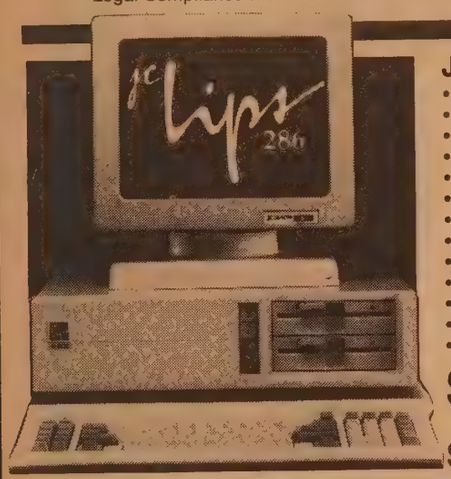

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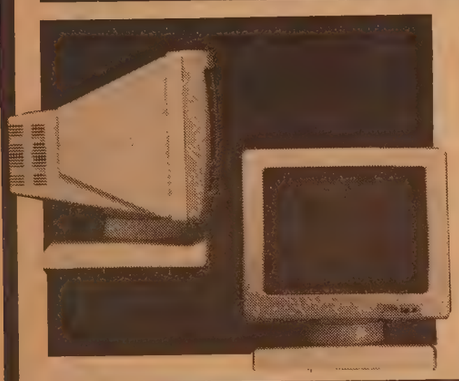

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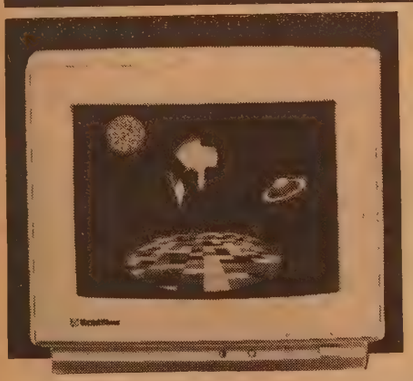

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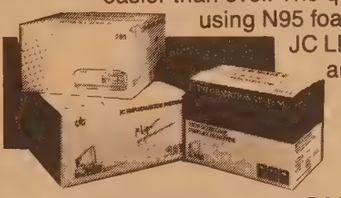

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NEWSBYTES™

EDITED BY WENDY WOODS

PS/2 Clones On The Way; Apple Expects $2 Billion Year

Here Come The PS/2 Clones

SAN FRANCISCO, (NB)—The first two semiconductor products designed to be a part of an onslaught of IBM PS/2 clones have been announced. The first, a chip set from Chips & Technologies in Milpitas, replaces 45 components in the XT or Model 30 and is said to out-perform IBM's own PS/2 line by 25%. The chip sets will be available to computer manufacturers in sample quantities next month. Chips & Technologies won't name its customers, but several big companies are among them.

Meanwhile, Paradise Systems of South San Francisco unveiled its own reverse-engineering masterpiece—a chip called the PVGA1 that's said to be completely compatible with the PS/2 line's graphics system. The chip will be sold to manufacturers for incorporation in complete computers and in add-on cards to make current PCs run new PS/2 line software. Sample quantities are expected to be available next month.

New WordStar Announced

SAN RAFAEL, CA (NB)—The fifth version of the venerable old word processing staple will be shipped in mid-August, according to MicroPro International. The new *WordStar 5.0*, $295, has over 100 improvements, including an onboard 61,000 word dictionary, options of using the new or old *WordStar* commands (pull down menus or keyboard commands), laser printing capability, and more. The new *WordStar*, which has some desktop publishing features, is expected to replace *WordStar Professional 2000*, which many found too complicated and cumbersome. Word is there are 2,000,000 *WordStar* users currently in the world, and since many of them are still CP/M version users, they too will finally be recognized. MicroPro plans to release *WordStar 4.0* for CP/M computers next month, its first CP/M product in years.

Microsoft Ships Word 3.01, OS/2 Developer's Kit

REDMOND, WA (NB)—Registered owners of Microsoft *Word 3.0* for the Macintosh are receiving a free update of the program, after which it will be sold in retail stores. Microsoft says the new word processor converts files, paginates, and prints to non-Apple serial printers better than 3.0 did. Best of all, version 3.01 allows installation of an unlimited number of fonts, which are displayed alphabetically on the font menu.

Those of you who would like to develop software for the OS/2 line should also dig deep for the $3,000 needed for Microsoft's OS/2 Software Development Kit. The kits are shipping now, and enable programs to be ported to IBM's new line of 80386 machines, as well as the 80286 computers. The basic hardware needed to run the system is an AT or compatible, or a PS/2 with MS-DOS 3.0 or higher.

And finally, Microsoft's stellar financial journey went into warp speed with its fourth quarter results. Fourth quarter demand for Microsoft products shot profits 50% higher than this time last year. Sales were nearly $100 million dollars compared to $63 million a year ago. While laymen may think these are terrific results, the analysts say they expected better. But new administrative costs, associated with new OS/2 marketing and promotion, dampened the profit figures.

Sculley Predicts $2 Billion Year For Apple

CUPERTINO, CA (NB)—Apple's chief John Sculley told analysts that if they thought third quarter figures were good, they should see what the fourth quarter will produce. If Apple's prediction of $725 million in sales for the quarter ending September 25 comes true, it will make Apple, for the first time, a $2 billion a year company.

Apple says its Macintosh SE sales accounted for nearly half its third quarter revenues, and is now the firm's top-selling computer. Apple says profits are up 65% and revenues are up 42% over this time last year, amounting to $637 million for the last three months. Industry watchers say Apple is finally making wide inroads into the business market, and is taking advantage of the confusion around IBM'S PS/2 line of computers. "While Compaq and IBM are in a bit of a shouting match, Apple is quietly gaining market share in Fortune 1000 companies," Bruce Lupatkin, an analyst with Hambrecht & Quist in San Francisco was quoted as saying.

A recent survey by Kidder Peabody shows a bright future for Apple. The survey of Fortune 1000 companies found 30 percent expected to buy Apple computers within the next year.

Following an Apple official's testimony in Washington that a ban on Toshiba products could hurt Apple, the firm has also announced intentions to "reduce its dependency" on Japanese suppliers. Apple's dot matrix line of printers is currently made by Tokyo Electric, a Toshiba subsidiary in Japan. No word on where Apple will go for a new OEM supplier.

In other news, Apple is offering a free upgrade of *MacWrite*, *MacProject*, *MacDraw* and *MacTerminal* to anyone who takes their master disk to an authorized Apple dealer for replacement. The new versions make better use of the Macintosh SE and II and also perform with the AppleShare file server.

Activision Running In The Black

MOUNTAIN VIEW, CA (NB)—Activision people are celebrating the first turn in the company's fortunes in recent memory. The games company posted earnings of $524 thousand in its quarter ending June 27, compared to a loss of $1.9 million a year ago. Why the turnaround? Major surgery on Activision's titles. Twenty games and other software products were cut from production. Also, major surgery on operating costs was instituted by Activision President Bruce Davis, who took office in January after founder James Levy resigned. Activision is said to be the 10th largest independent software publisher in the U.S. and new strategic and product marketing focus is expected to raise its profile even higher. CONTACT: Loretta Stagnitto, ACTIVISION, 415/960-0518.

Sun Slashes Prices, Unveils 10 MIPS RISC Machine

MOUNTAIN VIEW, CA (NB)—Sun Microsystems has introduced its most powerful line of computers to date—$40,000 number-crunchers that go head-to-head with Digital Equipment's top-of-the-line VAXes and Apollo workstations. Designed for engineering and computer aided design, the RISC-based Sun-4 "supercomputing machines" have "Cray-like features" such as an ability to execute 10 million instructions per second. These are features normally found in minicomputers costing ten times as much.

The Sun-4s have one gigabyte of virtual memory and up to 128 megabytes of main memory. "SPARC is an architecture for the 1990s," says Sun's spokesperson Arun Tunaja, referring to the RISC architecture of the machines.

To spread the good news even further, Sun has licensed manufacture of the Sun-4's custom RISC chips to Fujitsu Microelectronics of Santa Clara, which won a contract to build them in the first place. Fujitsu, in turn, can sell these chips to other companies for inclusion in their own products.

And finally, Sun has sliced 15 to 19% off the price of its current line of workstations. This company is clearly serious about winning a workstation war.

Intel Plans 80486

SANTA CLARA, CA (NB)—Intel is hard at work on the next generation microprocessor, a successor to the phenomenal 80386, according to the *San Jose Mercury News*. The 80486 is said to be four times as dense—four times the numbers of transistors—as the 80386, with 1 million transistors. The report says the chip will run at the speed of an IBM Sierra mainframe. Intel confirms development of the 80486 is underway but refuses to provide details.

U.S. stories in Newsbytes are compiled by Wendy Woods, Ken Maize, and Dana Blankenhorn. Masayuki Miyazawa and Keizo Yamamoto compile the Japanese reports in Tokyo. Send all comments and newstips to Wendy Woods, Editor in Chief, NEWSBYTES, 39 Miramar, San Francisco, California 94112 or call 415-587-6389. Copyright ©1987

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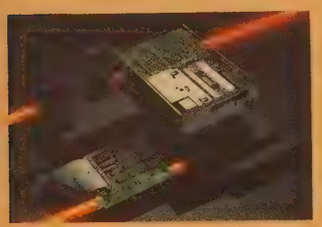

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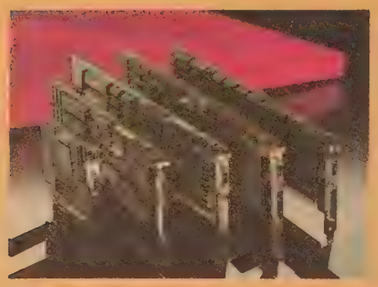

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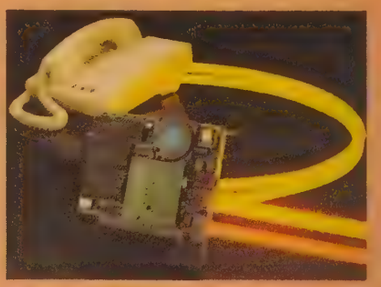

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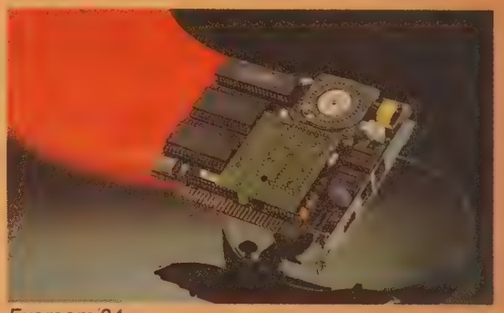

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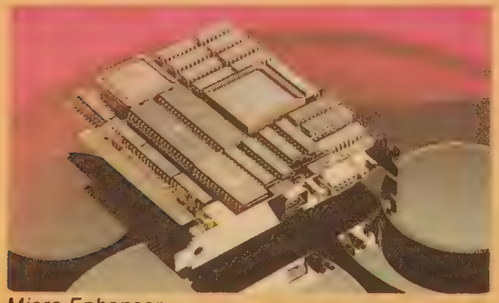

Micro Enhancer

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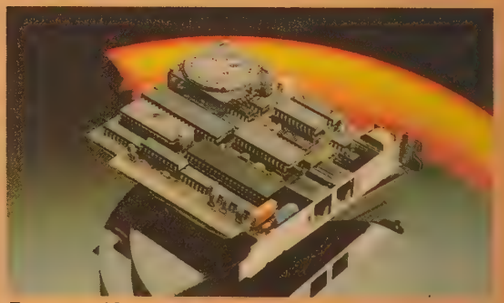

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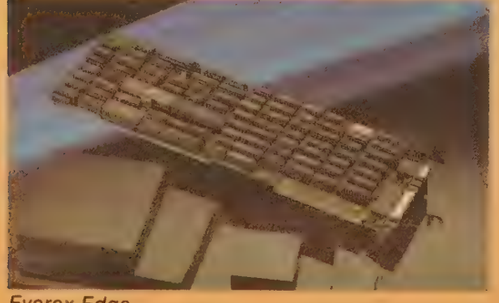

Everex Edge

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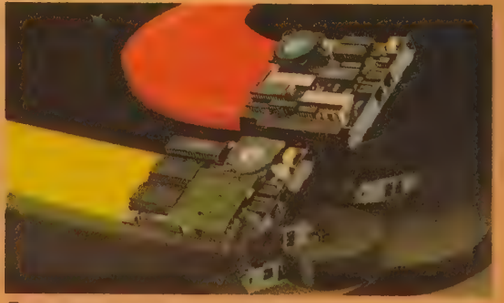

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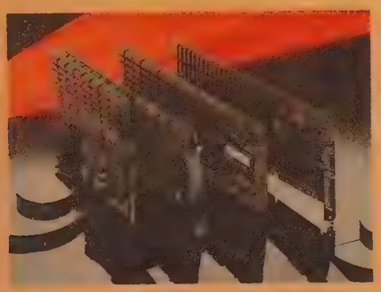

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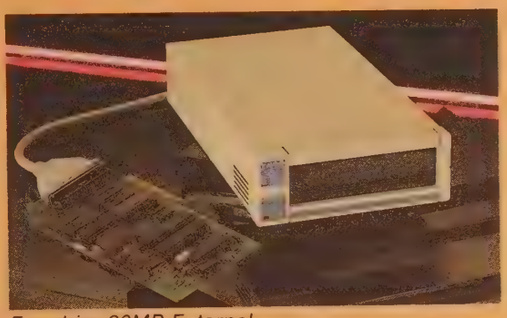

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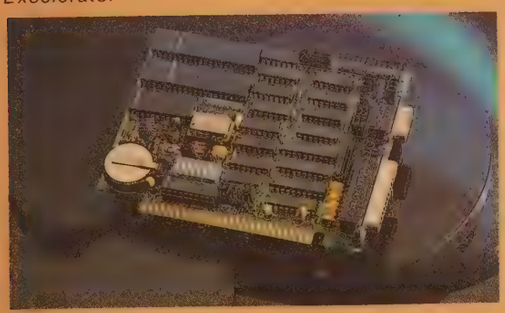

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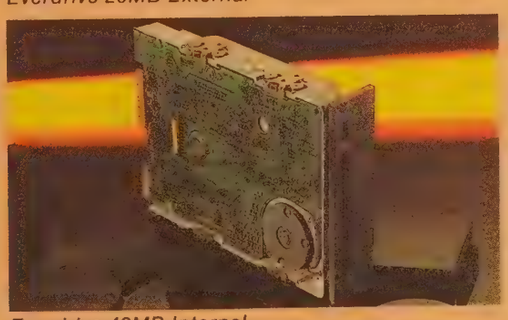

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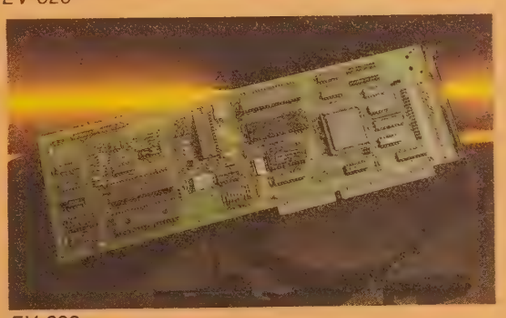

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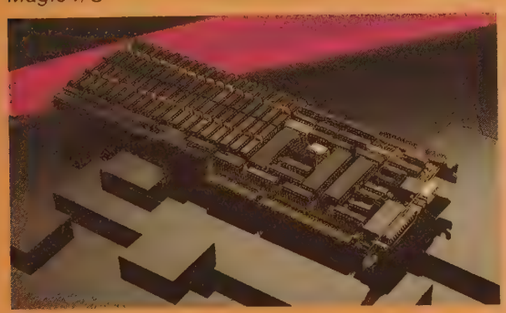

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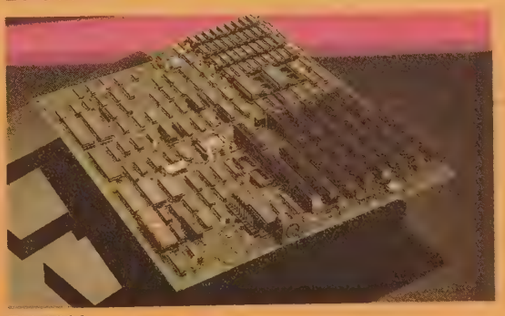

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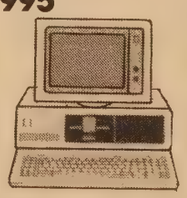

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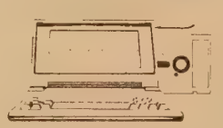

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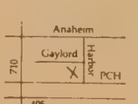

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Bill Landreth Arrested In Oregon

PORTLAND, Oregon (NB)—Recluse and author of *Out Of The Inner Circle* (Microsoft Press), a book detailing his excursions into some of the most powerful and tightly-guarded computer networks in the world, Bill Landreth has been apprehended by U.S. marshals. Authorities, acting on a tip from a McMinnville, Oregon resident who labeled him a "suspicious character," say Landreth was ragged, shoeless, and despondent when arrested.

Landreth disappeared from his San Diego house in September, leaving behind a note detailing his plans to commit suicide before his 22nd birthday (December 26). Friends and colleagues sent out missing person notices on bulletin board systems worldwide and feared the worst. Landreth had been on five years' probation, a sentence stemming from his penetration of GTE Telemail, NASA, and Defense Department computer systems. Authorities transported him back to San Diego to face new federal fugitive charges. Microsoft Press is still awaiting the manuscript for his second book, a successor to *Inner Circle*, which was due one year ago.

Landreth has been ordered to undergo a three month psychological evaluation to determine "what is going on in his head," according to the judge in the case. Landreth is reportedly deeply depressed and is on medication.

Plaintiffs Win In Osborne Lawsuit

SAN JOSE, CA (NB)—A group of 13 investors in Osborne Computer Corporation, who bought $10 million in Osborne stock warrants before the firm's expected public offering in 1983, have won back at least part of that investment. In a trial involving two lawsuits, the Santa Clara County Superior Court jury has sided with the plaintiffs, who fingered the "reckless and slipshod" work of the Arthur Young & Co. accounting firm, which was responsible for inflated and erroneous financial figures which gave everybody the impression Osborne was doing well.

Court records revealed the audit showed a $69,000 operating profit for fiscal 1983 when in fact the firm had just lost $3 million. This independent audit was conducted poorly, contended the investors' attorney Paul Dawes. They "messed up and then covered up" their negligent auditing. Within months of the Arthur Young forecast, Osborne canceled the public offering and filed for Chapter 11.

Another victorious plaintiff was a former Osborne director, Robert Bily, who also charged Arthur Young with negligence. He was awarded $1.1 million by the jury.

While both Adam Osborne and Arthur Young himself were originally charged with fraud, both were acquitted of that charge.

This was the comment from Arthur Young & Company partner Jim Farris, "I don't believe it is a fair verdict and we have every intention of appealing."

Mergers And Alliances

SCOTTS VALLEY, CA (NB)—Borland International has agreed to merge with Ansa Corporation, maker of the Paradox data base product. The deal, which makes Borland the fifth largest software company in sales in the U.S., came as a surprise to most analysts, who point to the two companies' wildly diverse products and approaches to marketing. Borland is the leader in low-priced packages that sell to consumers; Ansa, of Belmont, CA, sells a very expensive, $725 database that sells to

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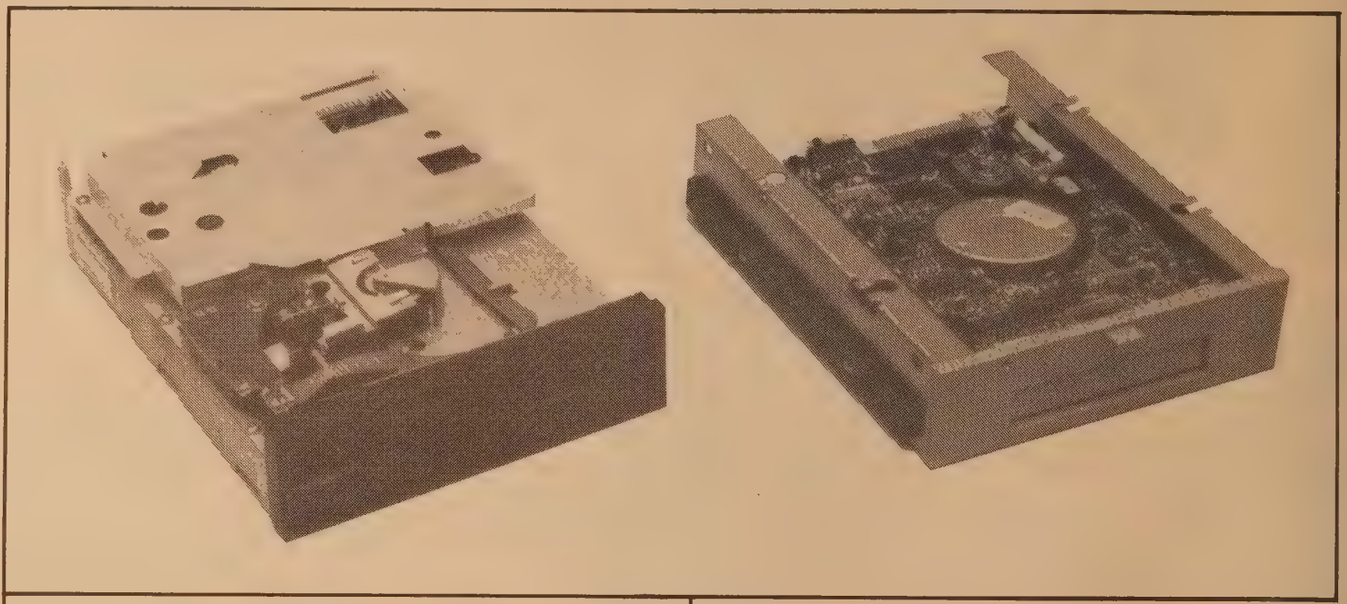

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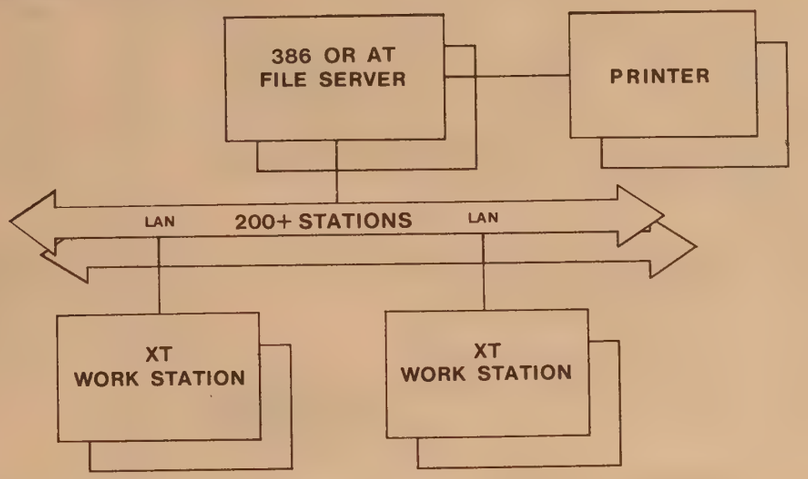

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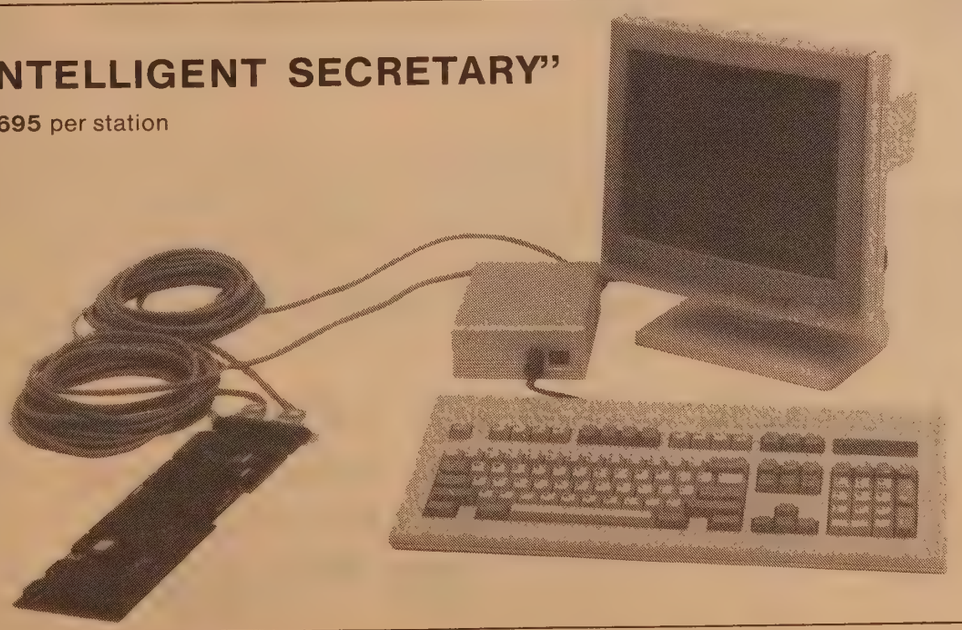

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high-level corporate customers. So why the merger? "This is a strategic alliance," says Borland's President Philippe Kahn. "We now have in place the technological, financial, and managerial resources to build a strong software company for the years to come." In other words, it was time for Borland to branch out.

If the deal is approved by Borland shareholders, Ansa will be a wholly owned subsidiary of Borland. Ron Posner, the ex-Ashton-Tate manager who left to start Ansa, will remain president of Ansa and, along with venture capitalist Ben Rosen, is expected to take a seat on Borland's board of directors. Posner will also become executive vice president of sales for Borland. The combined companies will be worth an estimated $250 million.

Meanwhile in Mountain View: "It's time to do bigger things," says Living Videotext's President Dave Winer in a prepared statement. That he's done. Living Videotext, maker of *ThinkTank*, has been bandied about as a hot takeover prospect for weeks. Symantec of Cupertino, whose most famous product is the Q&A file management program, has merged with Living Videotext in a deal about which neither side will disclose financial figures. The agreement calls for Living Videotext to become an independent subsidiary of Symantec, and to retain Winer as the unit's president. Winer says he'll begin vigorous development of network communication software as his first priority.

What does the merger bring to both sides? Living Videotext gets the benefits of Symantec's strong management and established PC lines. Symantec gets a booming, small company with strong Macintosh products and fresh ideas. Winer, apparently, couldn't be happier. "This merger renews our commitment to be one of the largest and most influential Macintosh developers in the market."

Interestingly enough, Living Videotext has just moved to a new address, Easy Street, in Mountain View. CONTACT: Kandes Bregman, LIVING VIDEOTEXT, 415/964-6300

Apple Calls Software Company "Claris"

CUPERTINO, CA (NB)—Next time you see the name "Claris" on a software package, remember it's actually an Apple product, at least for now, until newly christened Claris Corporation is strong enough to become an independent company.

Why "Claris?" It reflects the "clarity and distinctiveness and to remind us that shaping the future requires a clear vision," says its President William Campbell. That vision is still being shaped, as its current offerings are Apple software packages, but eventually it will include software from other vendors as well as originals. One of Claris' newest team members is a product developer from the hotbed of creativity, Xerox' Palo Alto Research Center—Yogan Dalal. He will serve as vice president of product development. By September 1, Claris' small staff will move to a new headquarters in Mountain View.

Bargain Prices On UNIX PC

SAN JOSE, CA (NB)—When it was first released in 1985, the AT&T UNIX PC was heralded as a breakthrough in low-cost UNIX computing with an MS-DOS option. Today the machine is virtually being dumped on the market at ridiculously low prices, one reseller claiming he's buying the 7300 model units, which include a 67 megabyte hard disk, two megabytes of RAM, a Motorola 68010 microprocessor, documentation, and other extras for $1,900 each—roughly a third of their original selling price. This news comes from NEWSBYTES columnist Denise Caruso, who says her

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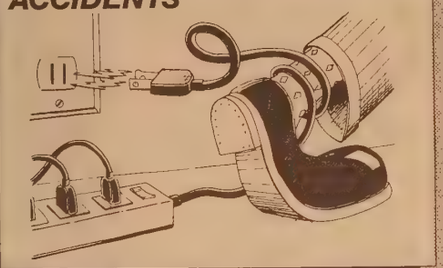

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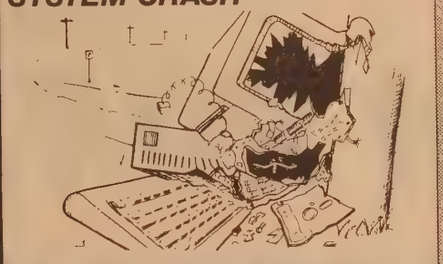

System crashes used to mean complete loss of data in memory, but not any more.

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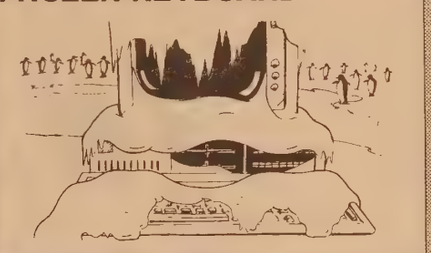

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source adds that you can now pick up an MS-DOS card for the PC, originally sold for $700, for just $140. Seems that Convergent Technologies, which had to eat excess inventory that AT&T decided not to buy, has reportedly sold its load to a third party. CONTACT: CONVERGENT TECHNOLOGIES, 408/434-2848

Atari Delays PC, Mega Releases, Enters Music Market

SAN JOSE, CA (NB)—"Later on this summer is the best I can say. The Mega ST will be here a little sooner," Atari spokesman Neil Harris told NEWSBYTES regarding the miss of a U.S. launch date for the company's new PC-compatible and souped-up ST.

According to Stewart Alsop's *PC Letter*, which keeps track of vaporware, Atari had projected an April unveiling for the PC, and later changed the intro date to July, which also saw neither machine in stores. Harris explains, "We are shipping the Mega ST in Europe already. They got first crack at the first batch that came in. We're now ramping up production for the U.S. market." The Mega ST, to be priced at $1,500, will look like a particularly good deal when matched with the Atari Laser printer, also $1,500, which has a projected release date of September. As for the $699 Atari PC, another low-priced unit, it will have 512K of memory, one disk drive, built-in Enhanced Graphic Adapter standard, built-in printer port, modem, and mouse ports. Monitor and hard disk are extra.

Atari has signed up 50 music stores nationwide to carry the 520 and 1040 ST, and plans to sign up another 200 dealers within the next few months. "The response was overwhelming," says Atari's spokesman Neil Harris. "It's a natural fit," adds J.J. Brown, vice president and general manager of Atari's U.S. operations. He says the ST is the computer of choice among musicians because of its built-in MIDI interface and low price. "We really hit a gold mine in this one," says Harris. While not the only machine used by musicians (the Macintosh and Amiga are contenders), the Atari ST is now supported by a variety of software that enable musicians to store, play back, and mix sounds from a variety of electronic instruments. CONTACT: Neil Harris, ATARI, 408/745-2160.

E-mail Connectivity

CAMPBELL, CA (NB)—Ever want to send an electronic letter to someone who's not on the same system you are? Say you want to send a document to someone who only has CompuServe, while you only have The Source and MCI Mail. Trouble, right?

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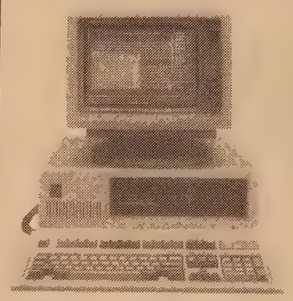

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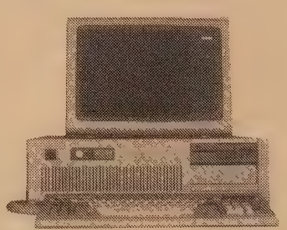

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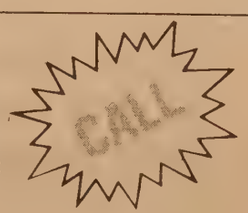

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Eagle Flies Again

SAN DIMAS, CA (NB)—When Eagle finally went belly-up one year ago, it left thousands of mourners. The firm's inventory of several hundred disassembled computers went to Campbell Electronics, which is now offering repair and replacement of Eagle computer parts, as well as free technical support. And get this—the company is not only servicing these orphans, it's planning to start producing one of the models!

Butch Campbell, the firm's founder, believes the machines should not have died out. "They're great machines!" he says of existing Eagles, which were among the first MS-DOS clones. Within the next few weeks he promises to have more on whether or not he can secure a license to make at least one species of Eagle rise from the ashes. CONTACT: Butch Campbell, CAMPBELL ELECTRONICS, 714/592-4611.

Businessland/Apple Ad Campaign

SAN JOSE, CA (NB)—Businessland and Apple Computer have teamed up to spend $1 million to promote the Macintosh SE and II through Businessland retail computer stores, according to *Computer Reseller News*. The weekly says Microsoft, 3Com and other major vendors will join in to promote their compatible products in the promotion scheduled to start August 14. The plan calls for Apple representatives to be stationed at Businessland locations for product demonstrations, cash incentives for Businessland salespeople who sell Apple products, and a great deal of print and radio advertising.

Unisys Unveils New Products, Strategy

SANTA CLARA, CA (NB)—Unisys announced BTOS TeleCluster, a computer networking system which plugs into and shares your existing phone lines. It's based on ClusterShare, software and a plug-in card which will set you back $2,100-$3,200 for a base station and $375 for each additional PC.

Also new is BTOS II, a new multitasking operating system for its B-25 line of workstations. The company says it "provides full support of the protected mode operation of 80286 and 80386 microprocessors," meaning it gets the most out of the newest chips. Unisys is also adding a switch to its screens so they'll they'll look more like Macintosh to the user.

Executive Vice President James A. Unruh also

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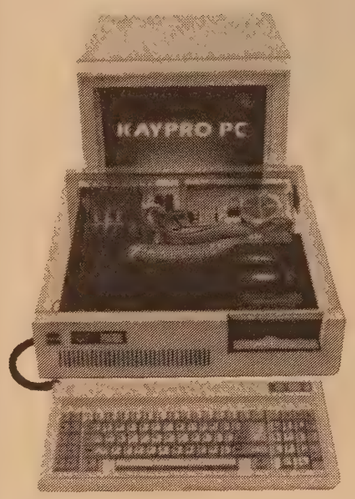

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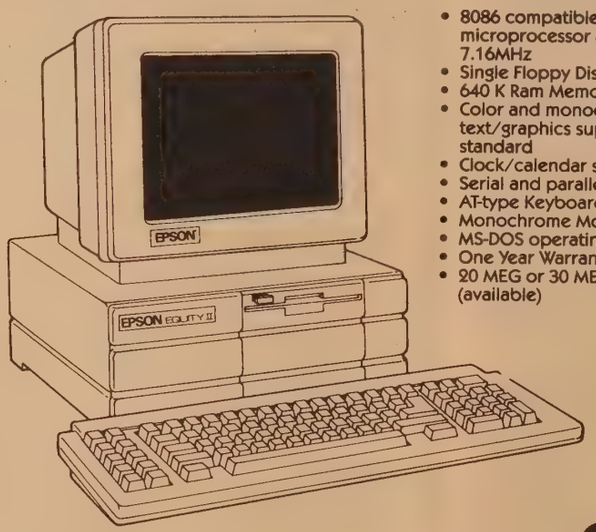

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discussed his company's strategy, keeping both the old Burroughs operating system and offering standards like OS/2, DOS, XENIX and UNIX as well. The sales force has been divided vertically by type of customer, as in finance, government, offices and factories. (Translation: What do you want? Sure, we do that.) CONTACT: Wayne W. Adams, UNISYS, (215)542-4673

Apple, H-P Good For Working Mothers

CUPERTINO, CA (NB)—Mom and apple pie have traditionally gone together as a great American tradition, but mom and Apple Computer? For the second year in a row, *Working Mother* magazine has put Apple among the top five best firms in the nation for working mothers. The magazine says Apple's pay, advancement opportunities, flexible scheduling, job sharing, and other benefits make Apple Computer a great place to work while raising kids. The magazine did not mention Apple's proposed on-site day care center, which has mysteriously been placed on the back burner at the company.

Hewlett Packard ranked fourth among California companies good to mothers. Women make up 44% of the workforce, they're given flexible working schedules to accommodate leaves for children and maternity, as well as time to get to work after the day care center opens. HP was given special praise for naming Nancy Anderson a general manager while she was on maternity leave.

Other computer firms mentioned in the survey as leading the nation in progressive treatment of employed mothers were Digital Equipment and Syntex Corporation.

California Computer Privacy Bill

SACRAMENTO, CA (NB)—The California Assembly Elections, Reapportionment and Constitutional Amendments Committee will vote on a bill to extend First Amendment-type search and seizure protections to electronic communications on August 19. Appeals are going out to the public to write letters of support now. The measure, titled ACA 36, was introduced by Assemblywoman Gwen Moore. If passed it will provide the same privacy rights to electronic communications as are provided to press and verbal communications. The measure, which amends the state constitution, would specify that personal information stored in electronic information systems and computer databases be included in search and seizure restrictions provided by the constitution. Send letters of support to the following people: Chairman Pete Chacon, Assembly Elections Committee, State Capitol, PO Box 942849, Sacramento, CA 94249; Assemblywoman Gwen Moore, State Capitol, Sacramento, CA 94249

Telecomm Alliances

CUPERTINO, CA (NB)—Tandem Computers has announced a joint agreement with GTE Corporation to develop large scale telecommunications systems for government and business. The deal is expected to make Tandem, famous for its nearly faultless data networks, and GTE, which owns 760,000 customer service phone lines in the Pacific Northwest, a formidable force in the lucrative government market.

Meanwhile, networking workstation-maker 3Com Corporation has merged with Bridge Communications, maker of systems that link various kinds of mainframes and terminals, in a stock swap worth an estimated $193.1 million. Both

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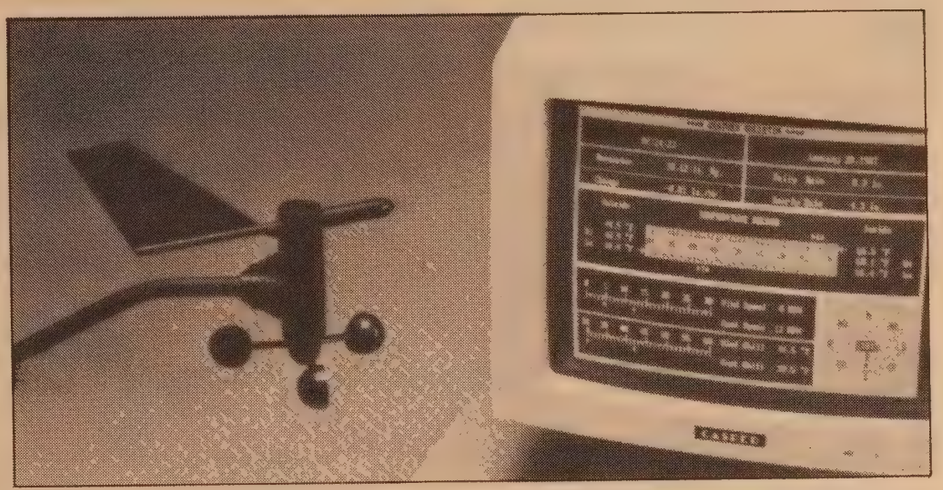

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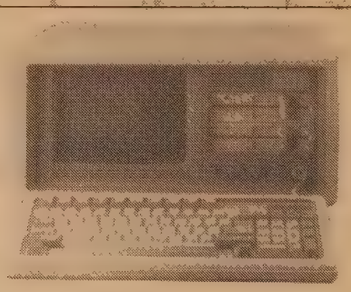

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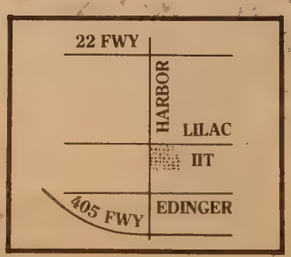

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companies are doing well financially, and the merger should create a firm with $150 million in annual sales and 1,000 employees. Bridge is expected to become a subsidiary of 3Com, which will be the combined firms' moniker. This is the third merger try for 3Com, which earlier this year was jilted by Convergent Technologies and Centram Systems West. "The third time's the charm," joked 3Com's Executive Vice President William Krause.

Brøderbund's Business Advantage

SAN RAFAEL, CA (NB)—Ever wonder what it feels like to be Lee Iaccoca of Chrysler or Rod Canion of Compaq? Then Brøderbund's new *Business Week's Business Advantage* game is for you. The game provides you with competitive data, market share, strategic company positioning, and economic and industry trends for GM and for Compaq. You're supposed to use this information to decide strategic and tactical moves. The program then puts your decisions through a simulated year of activity and gives you the good, or bad news, explaining through an Expert's Insight feature what happened and why. We're told Brøderbund will provide versions for other companies, based on profiles drawn up by *Business Week* magazine. The game is only for IBM, Tandy, and 100% compatibles, at a retail cost of $50. CONTACT: Joanna Witzel, Brøderbund, 415/492-3200

Simple Online Communications

NEWPORT BEACH, CA (NB)—We've just received a press release touting a new product that cuts through the confusing series of different online commands required to connect to nearly every electronic mail service. Called Connex, this software for PCs and compatibles, autoconnects any PC to MCI, Western Union EasyLink, AT&T, Zipnet, Netword, GEnie, The Source, Dialcom, Delphi, Infomaster and Compuserve, requiring the user to input only a few commands, and to learn none of the hosts' commands. Not only that, but this software apparently looks up the addresses you want to reach, automatically saves your mail to disk, can send up to 5000 personalized e-mail messages on hundreds of systems, and even allows you to keep a personalized database of names, telephone numbers, and addresses. The whole package consists of five diskettes and a 172 page manual, and costs $206. CONTACT: PRODUCTIVITY PERFORMANCE INC., 714/631-0515

Jasmine Technologies Alive And Well, Thank You

SAN FRANCISCO, CA (NB)—Macintosh hard drive maker Jasmine Technologies is not bankrupt and has no intention of being bankrupt, despite rumors to the contrary floating around Southern California. Jasmine's Mark McIntosh says the rumors started at a San Diego user's group where a certain member, working for rival CMS Enhancements, told of a Jasmine demise. But CMS Enhancements emphatically denies planting such a story, and told the BIX news service that its only inkling of the roots of the rumor was a story in Computer Reseller News which told of a bankruptcy filing by one Grant Jasmin, whose company is Advanced Logic Systems.

Jasmine is alive and well and plans to be at MacWorld in Boston with an 80 megabyte Macintosh drive that beats Apple to the punch.

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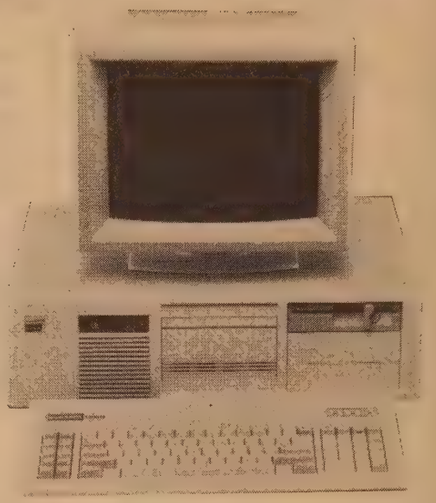

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NEWSBYTES SOUTH

By Dana Blankenhorn

Japan Dominates Business Trade Show

ATLANTA (NB)—The National Office Machine Dealers Association Show, just wrapping up here, demonstrated how and why Japanese companies are now dominating American markets. Not only did Japan-based companies have 85% of the floor space, but they had the most interesting items. Panasonic outdrew IBM and AT&T combined with its full-color copiers. And Panasonic salesmen were not only ready to deal faster than you can say Joe Isuzu, they were ready to deal on the office supply houses' terms, with full support.

Sharp, Ricoh, Toshiba, and Canon all had booths larger than the largest American booth, the kind you need a map to get around in. American computer companies, by contrast, never tailored their programs to office supply needs, and those American booths that were here were empty.

Not only have the Japanese won the office suppliers' business, including their computer business, they've won their hearts. Keynote speaker Tom Peters drew cheers with his attacks on American laziness and Congress' protectionist legislation. "The Japanese have been unfair. They learned the English language before they came over here and tried to sell to us," he said, to loud applause. At a press briefing he was even more explicit. "The last time a protectionist act of this magnitude was passed, it was followed by a depression and a war." CONTACT: Dana Andrus, NOMDA, (816) 941-3100

Compaq Attacks Gray Market, Denies PS/2 Clone

HOUSTON (NB)—Compaq, known here as "Big Gray" is evidently not happy with the big gray market for its machines. Vice President for Sales and Marketing Michael Swavely has told *Computer + Software News* that the company has been steadily cutting out dealers who sell new Compaq machines to discounters for resale. Earlier this year Compaq had roughly 1,950 dealers in the U.S. Swavely told the magazine he hopes to cut it down to near 1,700. The company's dealer development group says 1,800 would be more like it. (The irony is that Compaq machines are currently in short supply at some authorized dealers.)

Meanwhile, the company denied that it's making a PS/2 compatible, as some computer publications indicated after hearing President Rod Canion in New York a week earlier. In fact, press spokesmen insisted, all Canion said is that Compaq's existing machines can run current versions of Microsoft's OS/2 operating system. So, to get the power of a PS/2 in supporting up to 16 CPUs at once, buy a PS/2 with its Micro Channel Architecture. At least for now. CONTACT: Debra Glow, COMPAQ, (713) 370-0670

Complex Color Images In 2K

ATLANTA (NB)—A new set of algorithms from Michael Barnsley and Alan Sloan of Georgia Tech lets complex color images be transmitted in just 2,000 bytes each. The algorithms were developed under a combination of DARPA (for "Star Wars") and Georgia Tech grants totaling $780,000. Details were published in a recent issue of "Science News." A company started by Barnsley and Sloan, Iterative Systems, will try to exploit the new algorithms commercially.

Barnsley explained the new technique to NEWSBYTES this way. "You can almost think of it as an analog-digital converter. You take extremely high-resolution images, compress them into digital strings, and get back an image of any resolution you choose." CONTACT: Michael Barnsley, GEORGIA TECH (404) 894-2733

MacFax Coming

BOCA ROTAN, FL (NB)—Gulfstream Micro Systems Inc., which is in the process of being acquired by DEST Inc., plans to complete development of a Macintosh facsimile product in the next few months. The new product will compete with J T Fax from Asher Technologies (a unit of Intelligent Systems MLP).

As with its IBM product, EZ-Fax, (price: $1,495) Gulfstream's Macintosh facsimile product will likely be able to work in background, so you can send and receive facsimile files, even print them out, without interrupting your other work. CONTACT: Greg Friedman, GULFSTREAM MICRO, (800) 443-0500

NEWSBYTES EAST

By Ken Maize

IBM Profits Slip

IBM has also reported that the company's profits continued to slip in the second quarter, dropping 10% compared to second-quarter earnings in 1986. It was the fifth consecutive quarterly decline in profits for Big Blue. Profits were $1.178 billion for the quarter ($1.95 per share), compared with $1.305 billion ($2.12 per share) in the second quarter last year. Revenues for the quarter rose

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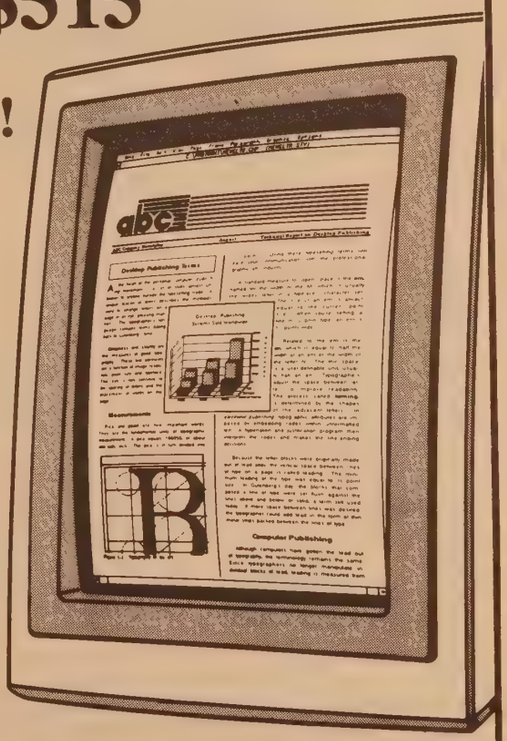

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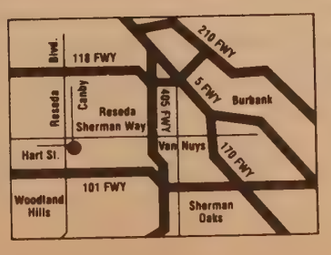

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4.3% to $12.8 billion from $12.3 billion last year. The slippage in profits was in line with what analysts had predicted. IBM hopes sales of the PS/2 will help turn the tide for the rest of the year.

IBM Fights For PS/2, Closes Out PC Line

IBM took some unprecedented steps in the last two weeks to dispel rumors the PS/2 is in trouble, and to push its users toward accepting it as "the" new standard in personal computing. Entry Systems Division President William Lowe told financial analysts that the company's closing out its XT 286 and PC AT lines in the next two months, and claimed that 250,000 of the machines had shipped by the end of June. The latter announcement is literally unprecedented (IBM never discusses its shipments), and self-serving in the extreme. Lowe used the words "shipped" and "manufactured"—not "sold."

The result is that users who don't want to pony up $2-8,000 right now for new IBM machines are now working on the Compaq standard, sometimes called MS-DOS. New Compaq-compatibles continue to be announced (Olivetti announced a new line in the last week) and users continue to demand them.

Meanwhile, IBM has introduced another version of its struggling laptop computer. The new machine, to be called the PC Convertible Model 3, features a backlit LCD screen and a new power supply to conserve battery power. IBM unveiled its first laptop, the PC Convertible Model 1, in April 1986 to resounding yawns. Then IBM followed with the Model 2, with about the same results. The new Model 3 will hit the road for $1,695, and Big Blue has also cut the price of the Model 2 to $1,395 from $1,695.

Toshiba Apologizes, Congress Growls

WASHINGTON (NB)—The Toshiba Corp. has taken out full-page ads in 91 newspapers across the U.S. to apologize for selling secret submarine technology to the Soviet Union. "Toshiba Corp. shares the shock and anger of the American people, the administration and Congress at the recent conduct of one of our 50 major subsidiaries, Toshiba Machine Company," the ad said. The company said it "profoundly apologizes" for the actions and would never do it again.

Meanwhile, the House Armed Services Committee pounded Toshiba by clearing for final action in the full House a bill that would keep Toshiba products off the shelves of military base stores. The panel also told the Pentagon to avoid any new contracts with Toshiba, which could be a big blow to the company. Toshiba hopes to get at least a piece of a major Air Force contract for laptop computers. The language on Pentagon business is non-binding. The panel rejected an amendment by Rep. Duncan Hunter (R-Calif.) which would have banned Toshiba from Pentagon sales. "Toshiba made it easier for the Russians to kill American service people," Hunter said. The Senate has already passed a Toshiba procurement ban, by 92-5.

Lotus Plans Release 3

WASHINGTON (NB)—Lotus Development Corp. will bring out release 3 of *1-2-3*, running on both MS-DOS and OS/2, next year, according to Jim Manzi, Lotus chief executive officer. The program will run faster, offer three-dimensional spreadsheets, and improved graphics, Manzi told a government group. Lotus will also offer *1-2-3G*, with an icon interface, Manzi said, once IBM releases Display Manager.

Lotus also announced that it will acquire Datext Inc. from Cox Enterprises of Atlanta. Datext provides business information on optical disks, competing with Lotus, which started offering business and financial information on optical disks last March.

Lotus said it rang up record sales of *1-2-3* during its second quarter, which led to net earnings of $16.3 million (36 cents per share) on $94 million in sales. That compares to profits of $11.8 million (25 cents per share) on $66.2 million in sales for the second quarter of last year.

IBM Forms Application Software Division

ARMONK, NY (NB)—International Business Machines Corp. has formed a new division to work on application software and a new marketing support organization aimed at mid-range computer systems. The new Application Systems Division will have worldwide responsibility for developing and acquiring software across the IBM line. It will also help outside firms that develop application software for IBM systems. A major focus of the software division is likely to be IBM's weak offerings in the middle of the market, where it is getting clobbered by Digital Equipment Co.

Canon's CAT Information Appliance

NEW YORK (NB)—Canon U.S.A. has unveiled a new word processor (aka "microcomputer") that features new cursor control technology developed by Apple Computer refugee Jef Raskin. Canon says the machine offers the first improvement in cursor control since the mouse and has named the machine the "Canon Cat." It's a computer that's supposed to be virtually idiot-proof, a true "information appliance."

At the touch of a button, a user can switch between word processor, calculator, or telecommunications functions. Special "leap keys" are designed to move across the screen twice as fast as a mouse. "You never have to remove your hands from the home row," Raskin told NEWSBYTES. The telecommunication function (the computer has a built-in modem) enables a caller to go back and forth between voice and data communications at the touch of a button. The machine will have a disk drive, but it will primarily be for archival use, not loading applications.

An operator can use the Cat's two "Leap" cursor control keys to "almost immediately locate information in a stored text of approximately 80 pages," says Canon. "With the Leap keys, text can be edited, moved, restyled, underlined, boldfaced and even checked for spelling with only a few keystrokes." Canon officials say the Cat will be available around August 1, at a suggested retail price of $1,495. A Cat daisy wheel printer will be available for $500. CONTACT: INFORMATION APPLIANCE, 415/328-5160.

Apollo Cuts Workstation Prices

CHELMSFORD, MA (NB)—Apollo Computer Inc., following the earlier lead of rivals Digital Equipment Corp. and Sun Microsystems, has slashed the prices on its engineering workstations. The result is further blurring of the lines between high-end microcomputers and the specialty workstations, used in engineering and computer-aided design. Apollo cut the prices on the Domain Series 3000 with 19-inch monochrome screen 50 percent to $5,990. The company added that it will roll out a $4,990 Domain 3000 with a 15-inch monitor in December. Analysts expect the three major workstation makers will all unveil new, top-end machines in the next few months.

Business Executives Still Computerphobic

NEW YORK (NB)—"Computer familiarity still runs low in the executive suite," observes the *Wall Street Journal*. Indeed, Thompson Baker, chairman of Florida Rock Industries, says, "I don't need a computer to tell me a thing is good or bad." John Courtney, president of the software firm Computer Task Group, doesn't have a PC on his desk. "I have no reason to have a keyboard at the office," he says.

But, says the paper, electronic mail may seduce the executives into the computer world. Alltel Corp., a telecommunications company, expects 80% of its senior executives will want terminals once the company's regional offices are linked to headquarters.

Data For The Masses

NEW YORK (NB)—Public Data Access Inc. has government and demographic statistics available on diskette from a wide number of government agencies, at $50 per disk. The disks run on IBM PCs and clones, with *1-2-3* or *dBASE III*. The company said it has over a million pages of files from the Census Bureau, the National Center for Health Statistics, the Environmental Protection Agency, the Nuclear Regulatory Commission, the Federal Election Commission, and other government agencies. Diskettes are also available providing economic, political, social, demographic, environmental, and public health information for every state, congressional district, county and zip code in the U.S. CONTACT: Public Data Access Inc., 30 Irving Pl., New York NY10003, 212-529-0890.

Government Spending Patterns: Micros Are In, Toshiba May Be Back

WASHINGTON (NB)—The go-go days of spending on computers in the federal government are gone, reports the *Washington Post*. But personal computers are taking an increased share of the data processing mix. "I think they're just running out of things to spend it on," said Robert Dornan of Federal Sources, a consulting and sales firm based in Vienna, VA. The shift toward PC's, said Gartner Group analyst Ulrich Weil, "has enabled the government to get more bang for the buck and to get some flattening out of the spending curve." Modern micros, noted Weil, "can do jobs that maybe 10 years ago you needed a big mainframe for, so on a unit price things have gotten much cheaper."

According to Federal Sources, overall spending on computers in the federal government has risen from $9.1 billion in fiscal 1982 to $16.5 billion in the current fiscal year. Spending is expected to hit $17.1 billion next fiscal year. But that will represent a growth of only 3.7%, compared to the normal double-digit growth patterns of earlier years.

There are hints and rumors that the Pentagon may be about to relent and send some business Toshiba's way. The Defense Department has been furious about Toshiba's sales of computerized milling equipment to the Soviet Union, enabling the Soviets to make their submarines quieter. But heads have rolled at Toshiba, and both the giant company and the Japanese government have been engaged in major groveling. Prime Minister Yasu-

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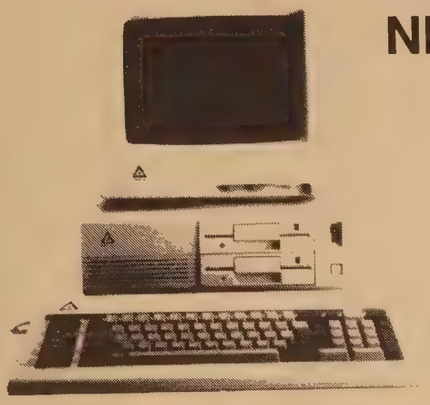

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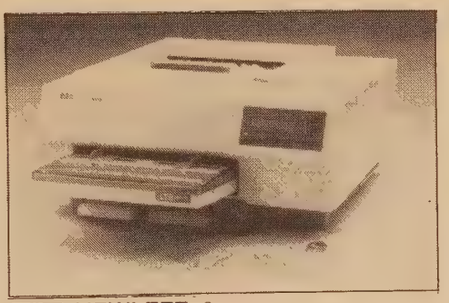

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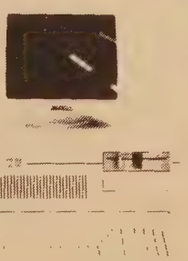

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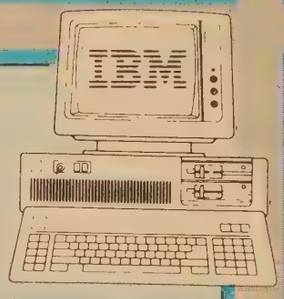

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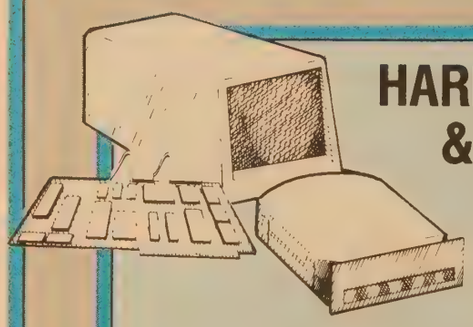

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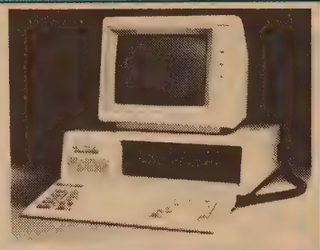

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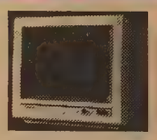

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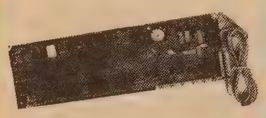

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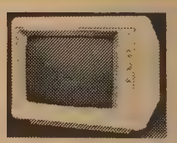

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hiro Nakasone called the diversion to the Soviets "a gross betrayal" and hastily dispatched Minister of International Trade and Industry Hajime Tamura to Washington for personal apologies to President Reagan and Congress.

The French news agency AFP has quoted Toshiba's new president Juichi Aoi that the company "recently received an inquiry from the [U.S.] Department of Defense" about whether the company can supply laptops produced in the U.S. Final bids for the Air Force laptop contract were due at the end of July. Toshiba was widely rumored to be in the finals, prior to the disclosure about the sale. A Pentagon source told NEWSBYTES, "Don't be surprised if Toshiba ends up supplying laptops." Congress is currently considering banning Toshiba exports to the U.S. for two-to-five years, but the administration opposes the legislation.

Founder's Son Takes Over At Wang

LOWELL, MA (NB)—The key to the future for troubled Wang Laboratories is President Frederick Wang, eldest son of founder and board Chairman An Wang. Says a profile in the *Wall Street Journal*, "Bright and talented—but naive and arrogant on his way up—the 36-year-old Mr. Wang must turn around a larger computer company still shell-shocked by a sudden reversal after a decade of spectacular success." After record profits of $210.2 million in 1984, Wang's net fell to just $15.5 million in 1985. The company expects to report a loss for fiscal 1987. So far, says reporter William Bulkeley, the younger Wang is getting good reviews for his ability to delegate and his candor. But a key task is to move out of the shadow of his legendary father and demonstrate that he can really run a major company. A former Wang product manager expressed the problem that will dog Wang, "Would Fred have the position if he wasn't Dr. Wang's son? It's unlikely."

Pictograms For Mac

MALVERN, PA (NB)—Cricket Software has a new piece of software that will produce pictograms, those cute little graphics that use pictures along with numbers, such as six wine bottles representing six million bottles of wine sold. The product, *Pict-O-Graph*, also lets a user color portions of the image, to represent divisions. The program uses bit-mapped images from internal libraries and users can also create images. It will also import data from spreadsheets and word processing programs. *Pict-O-Graph* also has drivers to output high-resolution slides to a series of film recorders. *Pict-O-Graph* is $195, and the film recorder drivers are $200 each. The program runs on Macintoshes with 512K of RAM and also runs on the Mac II in color. CONTACT: Cricket Software, 30 Valley Stream Pkwy., Great Valley Corporate Center, Malvern, PA 19355, 215-251-9890.

Merrill Lynch Bullish On CompareRite

CAMBRIDGE, Mass. (NB)—JURISoft's *CompareRite*, which can compare two documents on a personal computer and identify differences between them, is winning raves from the editorial services department of Merrill Lynch Corp. "We save time because we can see very quickly just where changes have been made from one draft of a document to another," said Henry Hecht, manager of the department. Hecht said the company used CompareRite during the writing of the chairman's letter for the annual report. "The letter was

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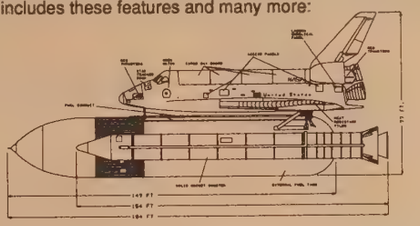

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rewritten several times," he said, "and each time *CompareRite* made it easy to see where changes had been made." According to JURISoft, *CompareRite* reads documents in all nine major word processing file formats. The program is $129.95. CONTACT: JURISoft Inc., 763 Massachusetts Ave., Cambridge MA, 02139, 617-864-6151.

IRS Bearish On Home Computer Deductions

WASHINGTON (NB)—The Internal Revenue Service continues to interpret its rules on when an employee can take a personal deduction on a home computer in the narrowest fashion possible. In private ruling 8725067, the IRS has nixed the following argument: You are a computer analyst for a large firm, required to be available at any time to fix problems with a system that links manufacturing, sales and distribution centers. Without a home computer, you would have to drive 30 to 50 miles to fix a problem when the system has crashed. That ought to fit the IRS requirement that an employee may not deduct the cost of the personal computer unless it is used for his employer's convenience and required as a condition of employment, right? Wrong! The fact that it's more efficient for you and your company to use the home machine doesn't mean that you require it to do the job properly. Deduction denied.

NEWSBYTES JAPAN

By Masayuki Miyazawa and Keizo Yamamoto

Japan Deplores Senate Action

TOKYO (NB)—Most of the Japanese newspapers (7/22) just devoted their front pages to report the U.S. Senate's resolution of the trade bill. The Tokyo-based major economic daily the *NIKKEI* said in an editorial, "The U.S. Congress is resorting to a most dangerous measure. The country is heading towards unilateralism, abandoning the multilateralism of the Paris-based trade agreement, GATT." At a press interview, one Japanese industry leader said, "The protectionist law is really regrettable. We expect U.S. leaders' final decision to be fair, based on a world-wide view." Meanwhile, they also added, "Japan needs to make a strong determination to protect free trade, acting on what it has promised."

Epson Moves Equity Production To US

TOKYO (NB)—Seiko-Epson (Nagano, Japan) is going to produce its personal computer at its Portland plant in the US by the end of July. The company plans to roll out 4,000 sets of its 16-bit PC EQUITY III+ per month. Epson has virtually ceased export of the computer to the U.S., due to the 100% tariffs imposed on Japanese personal computers this past April. CONTACT: Epson America, Inc., Torrance, 213/373-9511.

Popular Kanji Processor

TOKYO (NB)—A Japanese software house, Just Systems, has decided to open the interfaces and the specifications of its Kanji-conversion front-end processor (software) to the public. The ATOK is currently used in some applications, such as the company's best-seller Japanese word processor *Ichitaro*, and Japanese *Multiplan*. With the technology disclosure, more application software makers are expected to adopt ATOK in the near future. Thus, the company expects to rake in the royalties. CONTACT: Just Systems, 3-16 Higashi-Daikoucho, Tokushima-shi, Tokushima-ken 770, Japan □

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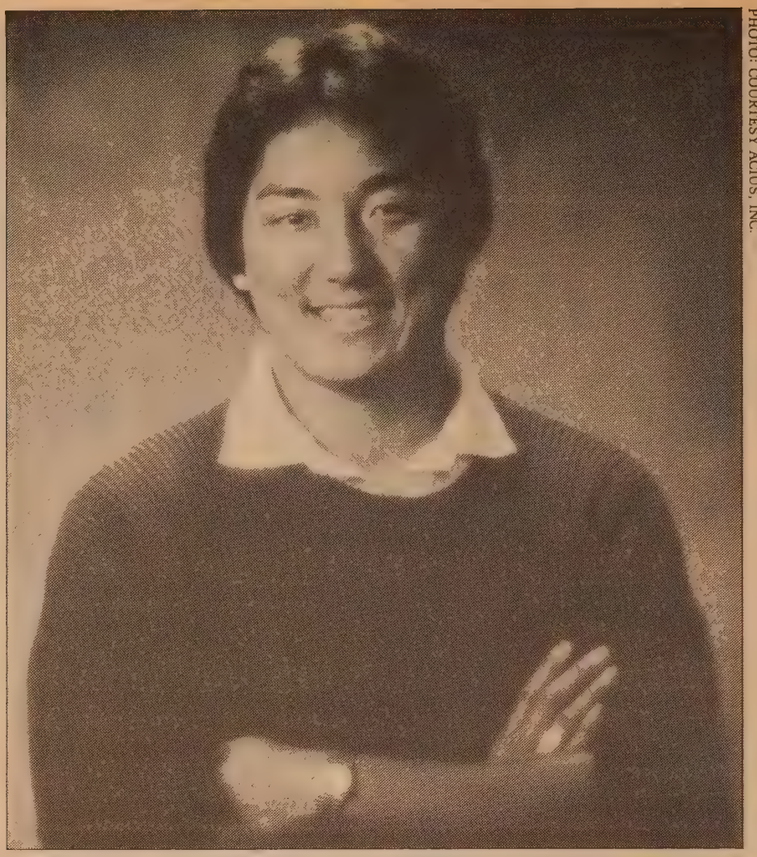

PHOTO: COURTESY ACIUS, INC.

Erstwhile software evangelist Guy Kawasaki has a new software company, with the revolutionary 4th Dimension database as its first product.

Guy Kawasaki:

Mac Databases Enter The 4th Dimension

By Mary Eisenhart

Guy Kawasaki, formerly Apple's premier software evangelist and now president of Acius, Inc., is demonstrating the charms of *4th Dimension*, his company's database for the Macintosh, to an appreciative audience at the Apple Business Seminar.

Gleefully showing off the program's power and flexibility, using his wife's hypothetical personnel file as an example, he gives her a hefty raise, moves her desk to a prime window spot on the seating chart, places her on the organizational chart, and stores various employee data. Finally, it's time to add her digitized photo to the file. He clicks the mouse and voila! the famous *MacPaint* geisha. Everybody howls.

"My parents wanted me to marry a nice Japanese girl. . ." he deadpans.

When we interviewed Kawasaki last year (May 1986), he and his intrepid cohorts were tirelessly campaigning to induce third-party software developers to create products for Apple's computers. In the interim, Apple has created a soon-to-be-independent company to market current Apple-label software, and abandoned its plans to market the French ACI's *4th Dimension* database, otherwise known as the fabled *Silver Surfer*. So when Kawasaki finished answering the questions from the audience, we had the chance to get his account of recent events and his thoughts on *4th Dimension* itself.

I'm going to to take 4th Dimension and do the most aggressive marketing and sales and support that I can. Because that's what I'm on the face of this earth for. Apple's on the face of this earth to sell hardware. It's a very different motivation.

So now you're in the software publishing business. How did that come about?

In March, Apple returned the rights of *4th Dimension* to the French company, ACI. The French company was approached by many American companies like Ashton-Tate, Ansa, Symantec, Microrim, to become their publisher. But, I guess because of their frustration with the Apple relationship, they decided that they wanted to start a company in America, as a publishing company that they started and funded.

So they approached me, and asked me if I knew anybody who could run it. I said, there's two people in the world who could do it, Alain Rossman [another veteran software evangelist] and myself, and Alain is at Radius, so I guess you're stuck with me.

There had been conversations back and forth, but that's when it started. And then on April 1st, actually, I was made a director [at Apple], and on April 4th I resigned, and on April 17th I started Acius.

Where did the name Acius come from?

Well, the French company is ACI, roughly translated as Analysis and Control of Information. So ACI in the United States is ACIUS. I checked the Latin dictionaries to make sure it didn't mean something stupid.

What does this wondrous database do?

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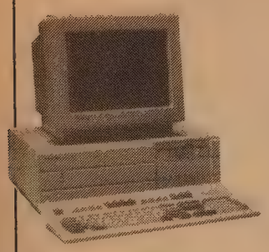

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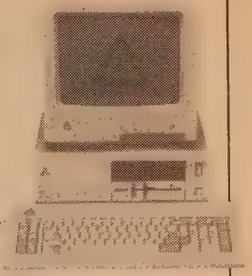

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This wondrous database, philosophically, allows someone to really control data and/or a personal computer. It's not just a product, it's more a philosophy.

This already exists in a French version?
Yes. It's been shipping in France, an earlier version, for about a year.

What distinguishes it from the other databases that are currently on the market?
It distinguishes itself in its openness and flexibility. There is a 200-procedure programming language within it, and if that language can't do it, you can also use a compiler and write external routines.

It has full implementation of Macintosh graphics, so that you can truly use the ROMs. It really allows you to create truly customized databases or applications.

Will it support multiuser systems?
Yes. There's only one form of *4th Dimension*, and it's either multiuser or single user, and you decide that at boot time.

So you don't have to buy special licenses.
No.

From a user's standpoint, as contrasted to the programmer/system designer's standpoint, what are its advantages?
From a user's standpoint—there are two kinds of users. One is a user who buys it and wants to develop a database and program it and create specific databases. That person gets the procedural language, and the external routines ability, and the *MacDraw*-like graphics, all of that stuff.

But that's 20% of the users, although they may control 90% of the decisions. The rest of the users, I don't think they really care whether they're using a *4th Dimension* database or an *Omnis* database or a *Helix* database—all they want to do is do their work. And for those kinds of users, what we offer them is the ability to have something that's truly tailored for them. It's transparent—they don't need to know that they're in a database—all they want to do is do their work. So for those users it means less training and less support.

You can design forms in the database?
Yes, or you can draw them in *MacDraw* or *MacPaint* and paste them in.

From a programmer's standpoint, what are its advantages?
The programming language, the ability to very easily do variables, like buttons, check boxes, radial buttons, scrollable areas, custom menus, icons. The procedural language, external routines—also run-times, the fact that the developer doesn't need to have his or her customer own *4th Dimension*. They can just own a copy of the run-time, which is much cheaper than the full-blown application.

Can it import data files and code from other programs?
Not code. It can import and export .SLK, .DIF and text. And also we can call the serial ports, so you can have mainframe connectivity there.

It imports programming in the sense that you can write a routine in Pascal and MPW, and have that routine work inside of *4th Dimension*. If you mean can it import just somebody's programming and magically make it a *4th Dimension* routine, no. It's for people who write routines outside to bring them in.

How would you contrast 4th Dimension with dBASE Mac?
There are two very apparent contrasts. One is that we are multiuser, in our first permutation, and also that we are run-time in our first permutation. We use a B-tree algorithm, they use a hashing algorithm, but besides all that kind of stuff, it's more important that you see where each company is coming from.

For Ashton-Tate, Macintosh is a source of supplemental income, additional income, hedging a bet—it's that kind of attitude. For Acius, *4th Dimension* and Macintosh are our *lives*. And it is what's going to make us successful or a failure. So it's not a side-bet for us, it's the whole shootin' match.

And we come from the Macintosh division, and I think one of our key advantages, despite our size, is that we truly know and love Macintosh, because we were part of the structure that built Macintosh. That's the more important difference.

It's been said that Ashton-Tate was one of the main protesters against Apple's marketing 4th Dimension.
As Shakespeare once said, methinks the lady doth protest too much. One of the beauties of working with Apple as a developer is that there are people that you can call and complain, unlike—other hardware manufacturers. And I think that not publishing *4th Dimension* was the right decision for Apple, because it would've upset too many third party developers. So I agree with that decision.

It also has some side benefits, like—it gives me a great opportunity to start a great company. And also I think that by Apple not publishing *4th Dimension*, the publisher of *4th Dimension* can be much more aggressive. Because with Apple publishing *4th Dimension*, they'd have to position it as an applications generator. They'd have to charge more so they wouldn't hurt lower-priced databases. They'd have to do all those things, trying to sell it, trying to position it, and yet trying to protect all their third party developers.

Acius has no such constraints on it. All we want to do is make the best and most popular database. So I don't have those artificial constraints and guilt feelings—my job is to build a great company with a great product.

So all things considered, Apple gets out of the problem of dealing with its developers, and they get a very aggressive marketer for *4th Dimension*, because I'm going to take *4th Dimension* and do the most aggressive marketing and sales and support that I can. Because that's what I'm on the face of this earth for. Apple's on the face of this earth to sell hardware. It's a very different motivation.

So I think that there may be a day when Ashton-Tate frankly regrets that Apple was *not* marketing *4th Dimension*.

I hope I can make it come true. There's a lot of David versus Goliath, it's the cult versus the establishment, it's the great product versus the great marketing organization—there's a lot of interesting elements here.

The Macintosh community is a very close-knit community. And it's not how much money you have for advertising and marketing, it's how good your product is. Macintosh is much more word-of-mouth oriented than any other personal computer market.

Does Acius have plans to market other products?
Yes. Acius is a publisher. Our first product is *4th Dimension*, but we will publish other productivity applications.

Are you looking for anything particular at this point?
Just something great. One thing I learned at Apple is that you can't just sit there omniscient and omnipotent, deciding on what's great. The great thing will walk in the door.

I believe that great software is written by one or two people, not by a team. And this product was written by one person—Laurent Ribardiere. We believe that we're not so much acquiring products as building a relationship, so we have a relationship with Laurent, one of the aspects of which is a royalty stream. But more important than the royalty stream is, we have to respect his intellectual property, and his programming ability to develop a great product, so he'll do the next revision.

So we can't just buy and skip—we're building a relationship. And when that kind of message goes out to the community, they will come to Acius with great product. Because not many publishers take that perspective.

Do you expect to stay pretty much in the business end of things, rather than the game end?
Yes. Although I must be honest—if we saw a game that justified the purchase of a color Mac II, I'd be very interested. Because that's just a kind of statement, that we're willing to sell a game that requires a $7000 system. That's kind of a statement to the world that we just want great product, and if you don't have a Mac II you can't use this product. I would do it, no hesitation.

How long do you think the absence of good color output on the Mac II is going to be a problem?
That's an open issue. Obviously right now you don't have a color laser printer in the world. Everyone wants one, not everyone can afford one.

I think that what the Mac II will do, because it has such good color, and it is affordable—for what you're getting, $5-7,000 is very reasonable—I think it'll be the catalyst for having color laser printers. If you had to buy a color laser printer before, it was very expensive *and* you had to buy a very expensive computer. So we just changed the world around—or Apple just changed the world around—so now there's a reasonably-priced color computer that is just crying for color laser printers. So that's what makes it happen. (Acius, Inc., 20300 Stevens Creek Blvd., Suite 495, Cupertino, CA 95014, 408/252/4444.) □

For Ashton-Tate, Macintosh is a source of supplemental income, additional income, hedging a bet—it's that kind of attitude. For Acius, 4th Dimension and Macintosh are our lives. It's not a side-bet for us, it's the whole shootin' match.

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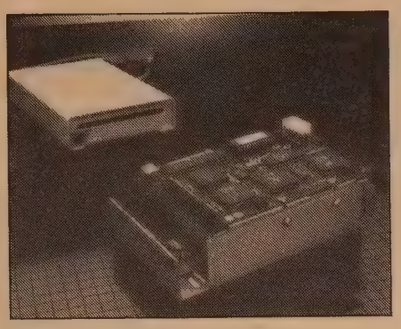

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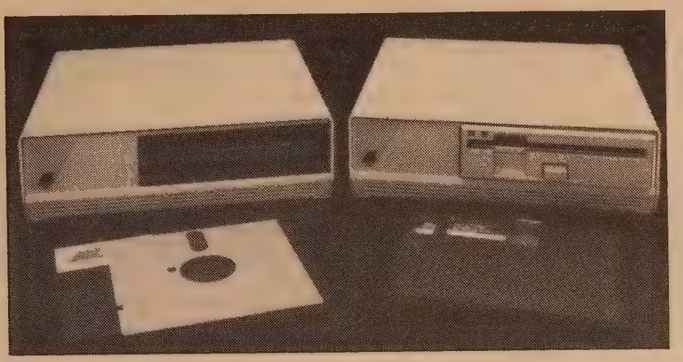

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An Interview With Ed Esber

Ashton-Tate: The View From The Top

By Jeff Spurrier

When you pull up to the massive futuristic art deco building that houses Ashton-Tate in Torrance, you immediately feel a sense of awe. This is a company with *substance*. And indeed, one look at the corporate stats only bolsters that image: revenues in fiscal 1987 of $210 million (an increase of more than 73% over the previous year), the leader in the international software marketplace, publisher of more than 40 computer-oriented books and add-in software products, creator of the industry-wide database standard: *dBASE II* (as well as a handful of other well-known products including *dBASE III Plus*, *Framework II*, the *MultiMate* series, *RapidFile*, *dBASE Mac*, and *Master-Graphics*).

Ashton-Tate is one of the Big Three, the triumvirate that rules the software industry; unlike its fellow titans, Lotus and Microsoft, it is based in California. Ironically, that proximity has brought it more close and critical scrutiny from the local press than either of its Big Three companions. A May 10 story in the *Los Angeles Times* business section raked the company over the coals, suggesting that despite its domination of the database market, the future is not too bright for Ashton-Tate.

"Despite [Chairman of the board and CEO Ed Esber's] projection that sales will climb to about $300 million this year, Wall Street is worried," said the story by San Francisco writer Victor F. Zonana. "Just last month, Ashton-Tate withdrew a planned offering of two million shares of common stock."

Adding fuel to the fire is the fact that the company has been through a few turbulent years lately. After a rise to prominence that sounds like it came out of Hollywood (a garage beginning in 1981 with less than $8,000, and a product—acquired in 1983—that was named after the home planet of *Star Trek*'s Spock), Ashton-Tate experienced a rocky period even in the midst of rapid growth. Its founder, George Tate, dropped dead of a heart attack at the age of 40 in 1984. In 1986, nine key executives left the company, while co-founder Hal Lashlee resigned from the board of directors and sold off a chunk of his stock—reportedly because of disagreements he had with Esber's direction of Ashton-Tate. In January of this year, Wayne Ratliff, the chief scientist and former vice president of Ashton-Tate (and author of the original *dBASE* code) left to form his own com-

PHOTO: ANN SUMMA

pany and began work on a "revolutionary" new database product (entitled Emerald Bay) with Incline Village's Migent Corporation.

The departures from the fold resulted in a series of lawsuits Ashton-Tate filed against former employees and outside companies (some of whom responded with counter-lawsuits) over allegedly misappropriating "secret technology." The most noteworthy were suits between Ashton-Tate and Migent (which is headed up by former Ashton-Tate VP of sales Carl Gritzmaker, and includes some two dozen ex-Ashton-Tate staffers). Migent reacted to Ashton-Tate's claims of a "nefarious scheme" to steal its trade secrets by filing a countersuit claiming that Ashton-Tate was trying to monopolize the database market.

In some press accounts, CEO Ed Esber has been painted as the heavy in the Ashton-Tate wars. The 34-year-old Esber came to Ashton-Tate in 1984 as an executive VP in charge of marketing and sales, and by the end of the year was named CEO and chairman of the board. And despite descriptions as a "buttoned-down" MBA graduate from Harvard Business School, Esber's credentials in the computer industry are well established. He began as an engineer at IBM in 1975, went over to Texas Instruments in 1978 as third-party software manager and marketing manager for two TI personal computers, and joined VisiCorp in 1979 as VP of marketing and sales where (according to his bio) he set up "the first marketing and distribution network in the microcomputer software industry —a success that resulted in his promotion to executive vice president, responsible for the entire strategic direction of the company."

In person, Esber is obviously a man who can play the variety of roles necessary for a CEO of a Fortune 500 company: at once a charmer and a tough negotiator, a man who can dress up as Patton or a football coach or Santa Claus for Ashton-Tate employee get-togethers, yet at the same time initiate blistering attacks on what he sees as "inadequate performances" by former chief employees.

And unlike many CEOs, he's not cloistered away in his corporate offices. During a trip to Palo Alto recently, he stopped by a local software store to see how Ashton-Tate's products were being displayed. He listened as the store clerk explained to a Japanese couple that a 3.5" version of *Framework* wasn't available. He immediately jumped in, introduced himself as the head of Ashton-Tate and explained that actually there was a 3.5" version available, and he would be glad to send up a copy once he returned to Torrance.

"The clerk just freaked," he recalls with some glee. "You must get out and visit the stores where the products are getting into the end users' hands."

For our interview with Ed Esber, we met in his offices in Torrance. At first his answers were somewhat guarded and reminiscent of the double-speak heard all week at the Iran-Contra hearings, but he soon loosened up, discussing everything from the Migent lawsuits to complaints voiced by *dBASE* power users.

What is the general direction of Ashton-Tate right now?

Ashton-Tate is one of the three largest software companies. We intend to continue to be a dominant player in the microcomputer software business. That means bringing out new versions for current products for the DOS world, as well as bringing out the appropriate products in a timely fashion for the OS/2 world. In terms of direction, we are going to continue to provide high quality productivity tools across categories to our end users.

"To some degree, we all in the DOS world had the luxury of dealing with an unconnected box. Tomorrow's world in OS/2 will really put demands on the database to help connectivity, get access to data, share data, etc."

How do you see the general focus of the database market industry-wide?

We're in a transition here from DOS to OS/2, and I'd say we're not going to have as level a playing field as we had going from the Apple II to the PC. But I would say the database area, more than any of the current conventional software product areas, will undergo the most demand to change, to become more like the conventional minicomputer world, from a database engine point of view, from a systems point of view, from a connectivity point of view. To some degree, we all in the DOS world had the luxury of dealing with an unconnected box.

Tomorrow's world in OS/2 will really put demands on the database to help connectivity, get access to data, share data, etc. Independent of the fact that I think that from the initial release of *dBASE II* to *dBASE III Plus* in 1985 we continue to give the users dramatic increases in capability—there's still a big gap between what is delivered today in the DOS world and what can be and is required to be delivered in the OS/2 world. And that's the challenge.

The real challenge for Ashton-Tate is to deliver the right products for OS/2. Some people don't believe that we're going to do that. Ashton-Tate has traditionally been underestimated. If you go back through the literature, we've always been underestimated, and we tend to surprise people on the positive side. I'm telling you, that I'm very confident that the products we have in the pipeline and the products we have assembled here—we're going to deliver the right products and we intend to remain dominant both in the *dBASE* development language area and in providing databases. It is our feeling that the best way to do that is not to go out and toot our own horn and talk about how good we are and make promises about tomorrow. It is to keep our heads down and execute. Unfortunately, recent industry events caused us to go out and give a peek at what's coming.

How do you view IBM's announcement that they're going to bring out their own database product for the OS/2 systems?

Certainly it's significant that they're bringing an extended edition with their own data manager. But in the future there will be a lot of database engines, and a database engine is really only a portion of what we bring to the end user to give him an application in his development environment. That engine initially is devoid of a lot of things, and there's plenty of opportunity for third parties to add to that engine, sell against that engine, either on the standard edition or the extended edition.

We are going to provide our current and future users the ability to build the kind of applications they want to build. Part of the solution is basically an SQL relational database engine. We will provide that solution, including the SQL database engine, as well as add-on pieces if the user wants to use that particular engine or some other engine.

Is that an extension of the dBASE III Plus idea, of including a full-blown programming language?

Well, *dBASE* is the most popular development language today for database applications on microcomputers, and we will continue to extend that language. A couple of weeks ago at the Compaq press conference, we basically gave an outline of three products in the database area that we intend to bring out in the future. The first was the next release of *dBASE* in the DOS environment—call it what you want, *dBASE IV, dBASE Workstation DOS*, you can call it whatever you want. But it is a significant new release of *dBASE* for the current world. We also said we would bring out a *dBASE* workstation product for OS/2, and we said we'd bring out what is called a *dBASE* database server. Those aren't specific product names. Those are concepts, directions for our end users. Those are three products we said we'd bring out in a timely fashion. We did not give shipment dates, we did not give product titles, we did not give prices. It was a directional announcement—which is what the industry needs these days.

By IBM pre-announcing the extended edition [of OS/2], by people like Lotus pre-announcing their database, what's been caused is a situation where some customers are clamoring to know everybody else's stands. And many of these products couldn't even be given ship dates, because nobody knows for sure when OS/2, Version 1 will ship, nor when OS/2 Extended Edition will ship.

It's almost like playing in the futures market ...

It is true that as more and more PCs get into large corporations, if people start looking at the numbers of PCs and software expenditures, that the buying cycle is longer and the approval cycle is longer, and therefore there is a need for some advance information about where you're going.

What was the reaction to the announcement?

I think we got a very positive response to what we said. And I think we added to some of the industry concerns about vaporware. Ashton and a few

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other companies were moving in the nice direction of not pre-announcing products intentionally before they're ready to ship. I think OS/2 has thrown all the rules out the door, and all of a sudden people are announcing OS/2 products—and in essence, when many of your competitors do that, you are almost forced to do that because otherwise it might adversely affect your current sales when people say 'Well, where are you going? And if you're not telling me, you must not know." They don't say "If you're not telling me, it must be smart."

Generally, however, you don't like to pre-announce?
We don't like to do that, no. Obviously we had announced a product for the Macintosh to be shipped late last year and we had to go back to the world and say we're not going to make that shipment date, so it's not to say instances won't occur in the future—but they weren't designed to be intentional.

How extensive is the movement of Ashton-Tate into the Mac world?
We have stated that *dBASE Mac* is the first of several products that we will bring out for the Macintosh and that's all we have said publicly. We view the Macintosh market as very important. I am an active Macintosh user myself [he points to the Mac on his desk behind him, which is on. The PC next to it is dark]. Ashton-Tate needs to offer a broad line. *dBASE Mac* is just our first in a line of products.

What about your activity in the desktop publishing arena?
We intend to bring out a product in the desktop publishing area, but the only thing we stated publicly was that we had formed a relationship with a company called Skisoft. We have not announced nor shipped a product.

I assume you saw the story in the L.A. Times in May about Ashton-Tate. The tone of the story was basically that Ashton-Tate was stumbling and headed for a fall. What was your reaction to that?
I believe a lot of what was said in that story was basically old news. To be frank I thought it was poorly written and poorly researched.

Did you receive any feedback from people in the industry calling you and asking what was going on?
Not really. I didn't receive any calls because of that article. I got more calls from people saying "I saw your face ..." or "You poor guy. Why did they write that story?" In terms of customers, it was a non-event generally, although it was reprinted in several other publications across the country.

How much do you feel the Migent lawsuit has hurt Ashton-Tate?
I don't really think it's hurt us with the customers. It may have caused some perception issues. For instance, one perception is that Ashton-Tate is not very receptive to outside authors, or outside authors might want to stay away because we have a certain legal posture. That hasn't proven to be the case, but I have heard that.

I think if you follow recent events you'll see we won an injunction against Queue Associates Inc., and recently we won a stay in a separate case that Queue filed against us in Monterey. So we have a history of proving conclusively that the issues upon which we filed this lawsuit are legitimate. Courts generally do not grant preliminary injunctions unless they feel there's a high probability of finding in our favor.

On pre-announcing products: "I think OS/2 has thrown all the rules out the door, and all of a sudden people are announcing OS/2 products—and in essence, when many of your competitors do that, you are almost forced to do that, because otherwise it might adversely affect your current sales."

As an outsider and one not privy to all the legal arguments, it seems to me that basically what's at issue here is proprietary knowledge. What is it? Has that been adequately defined?
Well, that is one of the issues. There are many issues and I can only go so far legally in communicating that to you. The broader issue in the industry is what is proprietary—both in terms of specific software, software ideas and thinking that goes on a company's payroll. The latter piece has been an issue since time immemorial in corporations. I can't control your brain. I do pay you to do research on certain issues on my payroll. Do I own your conclusions or not? That's a fuzzy issue. If somebody takes the plan for a new product that's clearly mine, that's a clear-cut case to most courts. The issue in the middle of those two extremes is the look-and-feel issue. I guess the boundaries of one's protection has not been defined totally, and there are several suits in the works that have been filed that will begin to set precedents and boundaries of protection for how software is expressed to the user.

Do you feel like the industry is watching this case?
I think they're watching the Lotus look-and-feel case more. In terms of alleged theft of proprietary secrets, that is an issue that applies to many different companies, and it's a question of how much can you prove, and what can you lay out in terms of history of what happened, when and why. It's further complicated by the fact that it is software, which is less understood than something you might build that's an easy plan, like a piece of hardware.

So basically you think the look-and-feel issue is more of an industry-wide concern?
Yes. I think every company has the right to protect the copyright of technology. The difficulty I think this industry is facing is what is proprietary in terms of interface, in essence, of functionality? That's a tougher one.

And are the courts able to really make a decision?
Well, if you're asking my opinion of the knowledge base in today's legal system, in terms of the look-and-feel case I don't believe there's an adequate knowledge base in the legal system. But, typical of our legal system, sometimes issues come up before the courts have adequately protected them with laws, and we increment them to the right decision. Very rarely does the legal system set a precedent in anticipation of an issue. The whole legal system is designed to solve something after the fact.

How long do you see the battle with Migent going on?
I believe that given Ashton-Tate's "victory" in the only two pieces of the puzzle that have been judged upon or reached the first level of conclusion in the justice system, that an environment is set to potentially resolve the issues.

I saw Wayne Ratliff at a seminar recently and he talked about Emerald Bay coming out later this year. Does that bother you at all?
I do not mind competition from anybody. Including Wayne Ratliff. The issue is how much of Ashton-Tate's secrets or how much of what Wayne sold to the company, is utilized in any potential product he ships.

And you wouldn't really know that until you get a copy yourself and break down the code.
That's quite possible, but there are avenues in the legal system to have third parties look at something in any state prior to announcement, to make a judgment of any potential infringement on anybody else's right.

Have you checked out the general description of what Emerald Bay is?
I'm pretty familiar with what has been said publicly.

People are touting it as revolutionary ...
Have you heard anybody who brings out a new product that hasn't stated it's revolutionary in a particular category? To be frank, I don't understand why you dwell on the Migent issue when the real competition, the real issues in the database area, rest around IBM, Lotus, Microsoft, more than they do around Migent or Microrim or Ansa. The big boys want to play now in this business.

I logged onto the Ashton-Tate Forum on Compu-

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Serve and asked for questions from board users, and I'd like to throw out a couple of those.
Good. That's the first time I've heard of someone doing that. That's a great idea.

"Ask (Esber) why Ashton-Tate has not released a fix for dBASE III Plus's many multi-user problems with indexes?"
It is my understanding that we are addressing as many of those issues as fast as we can. You have to remember that when *dBASE III Plus* came out in late '85, the state of what was thought of as multi-user art—it's probably primitive in relationship to what is used today. We are continuing to solve those issues, as well as bring out a new version of the product which hopefully will address all the issues.

"All of Ashton-Tate's emphasis seems to be placed either on future developments in database implementation, or in product diversification. SQL, OS/2, extended OS/2 with embedded SQL. WHO CARES!!! What I want to know is what are their thoughts on maintaining their current (developer, sophisticated, non-beginner, "power-user," system developer) user base? They think their consumer franchise is strong, but in my ex-product manager mind, that franchise is subject to severe erosion if the alternatives (QS, DBXL, Clipper, FoxBase) continue to be more attractive. I don't care a fig for file managers, graphics, MultiMate, Macintosh, or desktop publishing; all that product diversification is doing is leaving the door open for smaller firms committed to concentrating on one market, that of the developer."
I guess the user base that responded here is the *dBASE* developer [laughs]! There are probably millions of users who are concerned with word processing solutions and graphics solutions and others.

It is true, as the company diversifies and tries to bring out a broader product line, that it is difficult to meet the needs of the power and sophisticated users. I think Ashton-Tate did go through a period of time a few years ago where it wasn't as responsive and it wasn't listening as much as it needed to to the power users and developers. I think we've come around again. In future releases of our products we intend to meet the needs of these people, and quite frankly we did create, through our sluggishness in increasing the capabilities of our products and in listening to many of the people in the developer community, opportunities for other firms.

I guess I can't get angry or resent competitors who fill voids that we do not fill—either through our own ineptitude or decision making, or sluggishness, or whatever. If there's an opportunity and a customer needs something, somebody's going to fill it. My frustration, if anything, is the frustration of getting us to deliver the products, as opposed to frustration aimed at competitors. You can bet that myself and the rest of the senior management team is endeavoring to make this organization able to deliver on the needs of these people as fast as possible, and thereby not create such ample opportunities for other people in the database world.

"Ask him about his thoughts on the recently announced coalition of alternative dBASE language implementors, that A-T hasn't deigned to join."

"What we want to do first is make sure we do the job properly in the micro world. Then, and only when we feel we can do a good job, will we move into the mini and mainframe world."

A big question in regard to this is what is in the public domain. I am pretty certain there is not room for a second *dBASE* standard in the business. Were we extending the language in the performance of our product faster than we have, there probably wouldn't be a need to the degree that there has been for some of our users to capitalize on things that third parties have done. Again, I look on it as a challenge to us to deliver what they ask for to our users quicker. Make no bones about it. Ashton-Tate still controls the *dBASE* standard. When we add extensions to our language, it is third parties who will endeavor to become compatible. It will not be vice-versa.

"Instead of wasting resources on desktop publishing, why hasn't Ashton-Tate moved *dBASE* to other environments? Source code compatibility in a UNIX box or a System 3x or even in a 360 environment would sell like crazy. Look at Oracle or SAS. Great companies, great products. Oracle is soon going to own the DEC market and that could easily have been A-T's. And it's not too late."
We have stated several times—at least during my reign or in my watch—that we do have ambitions to move into the minicomputer and mainframe market, but I'll point back to some questions you asked me before. Some of the people were saying, why diversify where you are to meet the needs of the users?

Those two questions taken together, I have to ask you: Do I diversify within the micro computer world or into the mainframe and minicomputer world? And I would bet some of your readers would also question *that* diversification strategy versus this one.

What we want to do first is make sure we do the job properly in the micro world. Then, and only when we feel we can do a good job, will we move into the mini and mainframe world. Right now, while we might contemplate moving into the minicomputer database arena, the minicomputer database companies are spending a lot of their effort trying to move down into the PC arena. One might ask, is the steam out of the locomotive in the minicomputer database world?

I have a friend who has a small company, one guy at a photo lab. He's played around with *dBASE* and wanted to know why Ashton-Tate doesn't put out a limited version of the product, one aimed at a small businessman. A demo version for $25 or something. He wants to be able to test-drive dBASE to a limited extent, to find out if he wants to go through the trouble of learning it, and to see what it can do for him, even on a limited basis. He said he could see it was incredibly powerful, but it was almost a case of overkill for him.
It's interesting you would mention that. If I had to bet today about the number of features utilized versus the number of features delivered—across all products, not just *dBASE*—I would bet most products are underutilized. I believe we're giving the average user much more than he really needs, but not much more than he thinks he needs. Quite frankly it is the power users who influence these people.

We're constantly pulled in the direction by the power users for more, more, faster, faster. The average user is saying "I wish you could give just what you have in an easier-to-learn-and-use package." We constantly have to meet these two constituencies' needs. And remember that the average user is highly influenced in what he buys by the power user. Unless we meet the power user's needs, he won't recommend the product back to the average user.

I would think that the wider the gap grows between those two camps, the more complaints you'll see.
Well, interestingly enough, in the database area that gap is probably the widest, because the database product is one of the most sophisticated. The question is, do we ever split, in a major way, the capability into capability for developers only and capability for the average user only? What we have done is some special things for developers where we've added to the current product and given it to them. We haven't necessarily cut away from the current product and given it to the average user. But it's something to be considered.

What was it like coming aboard at Ashton-Tate? It seems like it would be like trying to hitch a ride on a tiger.
It certainly was a challenge. What I saw at Ashton-Tate when I was contemplating working here was a lot of potential. It seemed then (in mid-'84) that the company was attracting a lot of talent and there were a lot of products in the pipeline on which to build. Both of those things provided opportunity and also room to work on other things I saw that weren't necessarily what I would have liked to see. Most of the latter were related to running this thing like a business—having budgets and plans and review systems for the employees that gave them adequate feedback about what they're doing, and reward systems, etc.

In regard to that, do you think that Ashton-Tate had grown to be a big company without anybody realizing it?
That's one way to characterize it. Companies in this industry grow very fast. Those of us who are used to Silicon Valley or Route 128 find it hard to put that into perspective when you think of other companies that take 20 or 30 years to get to a $200

continued on page 88

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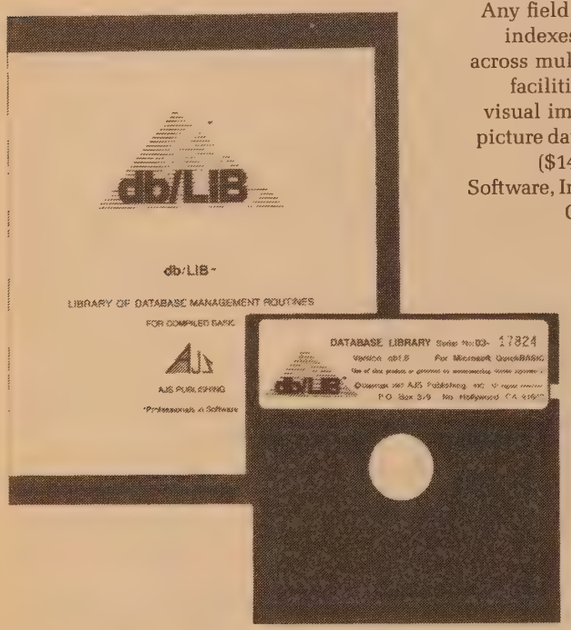
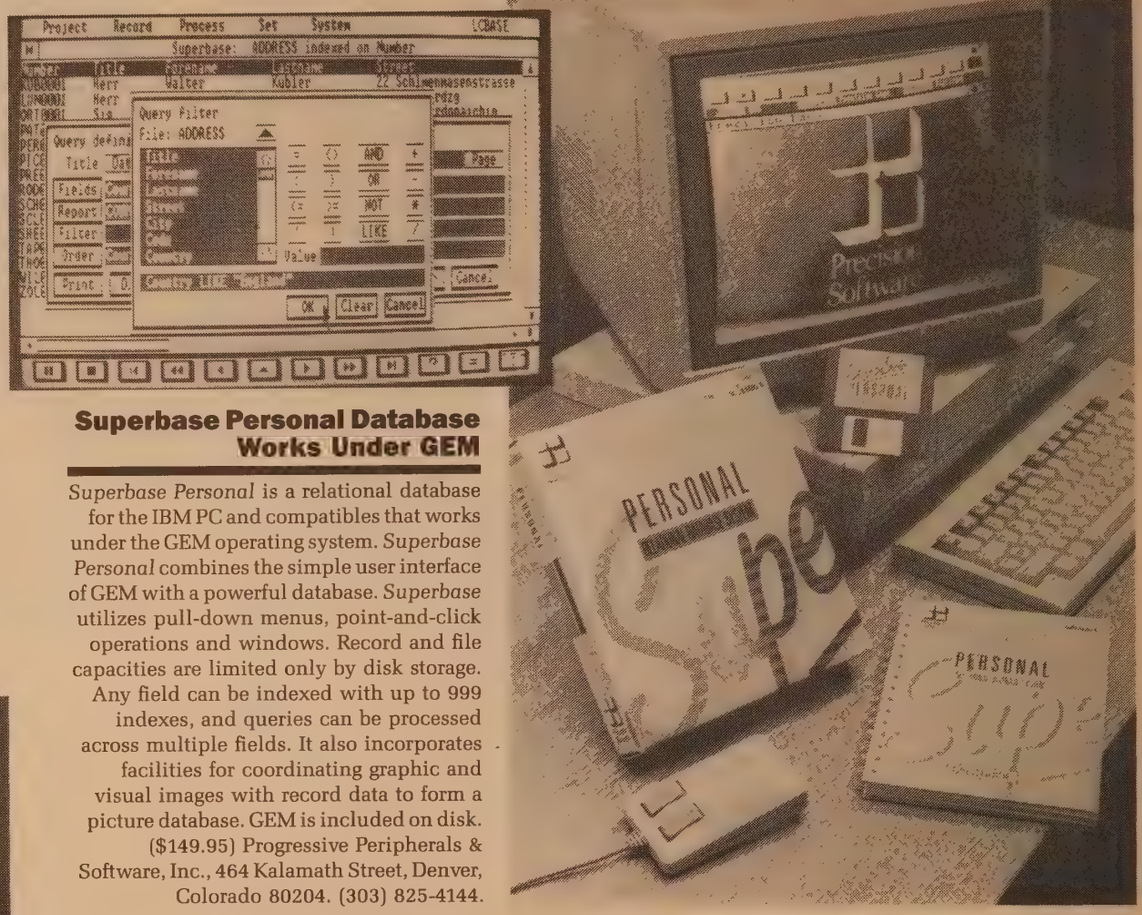
DATABASE BUYER'S GUIDE

dBASE Power For QuickBASIC Programmers.

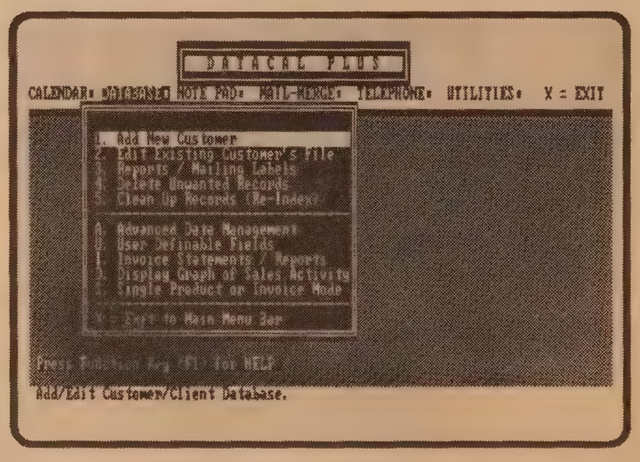
AJS Publishing's *db/LIB Database Library* allows the users of BASIC to use the language to create full-featured business applications which take advantage of high-speed database techniques. It is designed to enable any professional or advanced amateur programmer using Microsoft's QuickBASIC (version 2.0 or 3.0) to incorporate sophisticated database management techniques into applications they create. *db/LIB* has adopted the *dBASE III* standard for database, index and text files. ($139.) AJS Publishing Inc., P.O. Box 379, North Hollywood, CA 91603. (818) 985-3383.





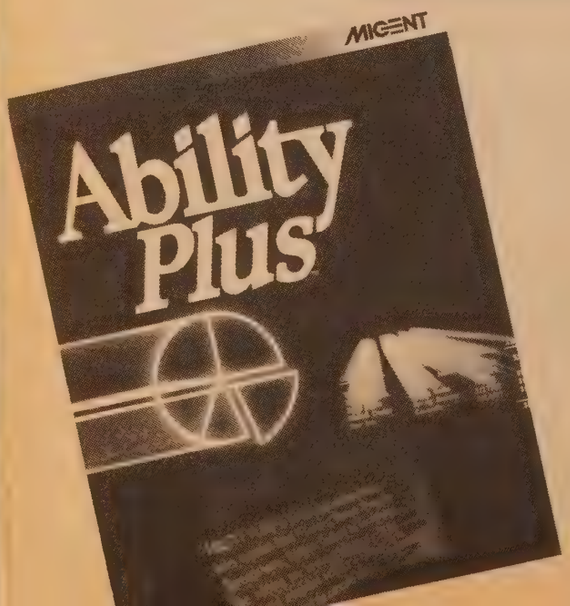
Superbase Personal Database Works Under GEM

Superbase Personal is a relational database for the IBM PC and compatibles that works under the GEM operating system. *Superbase Personal* combines the simple user interface of GEM with a powerful database. *Superbase* utilizes pull-down menus, point-and-click operations and windows. Record and file capacities are limited only by disk storage. Any field can be indexed with up to 999 indexes, and queries can be processed across multiple fields. It also incorporates facilities for coordinating graphic and visual images with record data to form a picture database. GEM is included on disk. ($149.95) Progressive Peripherals & Software, Inc., 464 Kalamath Street, Denver, Colorado 80204. (303) 825-4144.



Datacal Plus Manages Small Business Activities

Datacal Plus Version 2.0 is a data management and daily activities support program designed specifically for sales oriented small businesses and entrepreneurial users. It includes extensive database capability, mail merge, a note pad, automatic telephone dialing, pop up rolodex, and invoice and statement generation. *Datacal Plus* has a pre-formatted database management system so that the user can begin inputting data immediately. Since the program is *dBASE III* compatible, it is possible to merge letters using existing *dBASE* files. ($179) Lexcel Systems Inc., 333 North Centinela Ave., Inglewood, CA 90302. (213) 674-8505.



Migent's All-In-One System

Migent's *Plus* version of its *Ability* software adds more features to its all-in-one package. The entire system is menu driven and uses the same instructions in all six applications. *Ability Plus* includes a relational database that imports *dBASE II/III/Plus* and *PFS files*, a larger spreadsheet and Migent Pocket Modem and Hayes-compatible communications with XModem. It also includes a WYSIWYG word processor with 140,000 word spelling checker, and business graphics made from spreadsheet and database files. Integration links "live" data from any application to any of the others. *Ability Plus* will also do slide show presentations. ($99) Migent Inc., P.O. Box 6062 Incline Village, NV 89450. (702) 832-3700.

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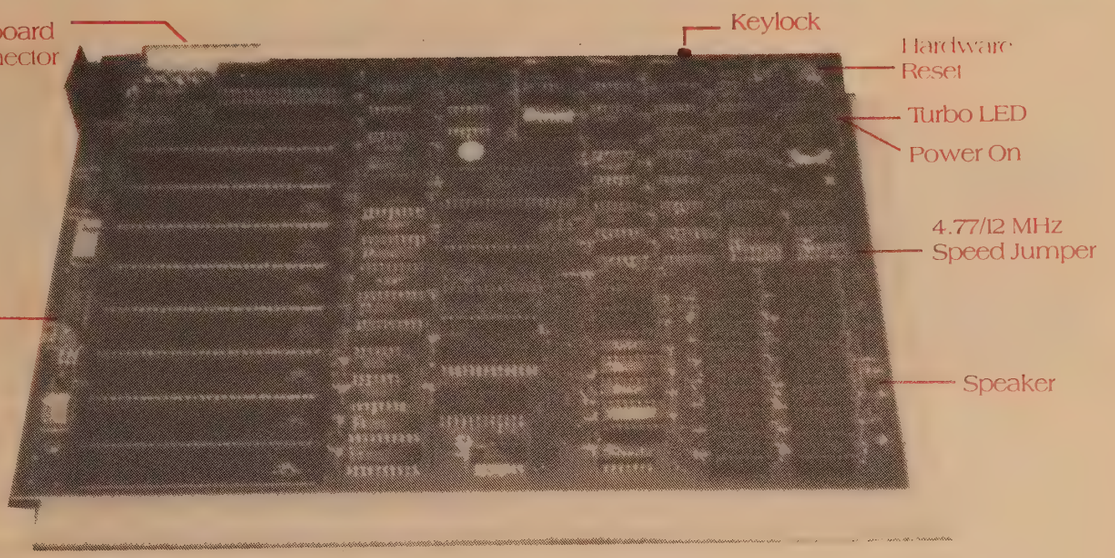

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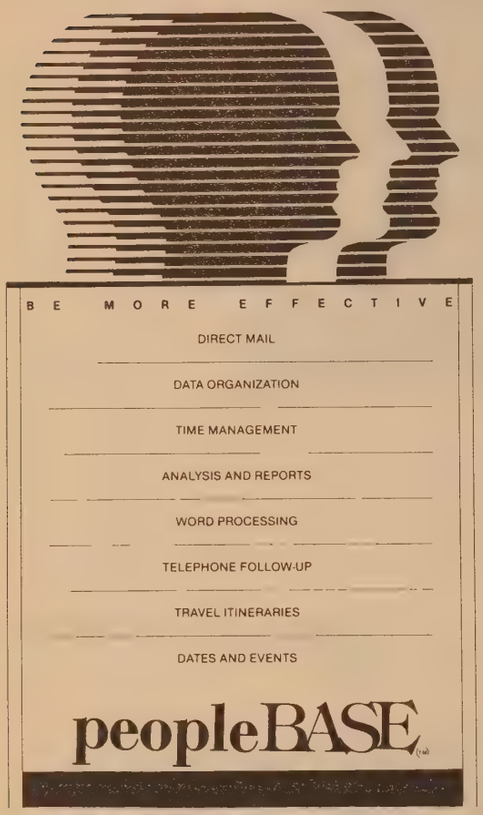
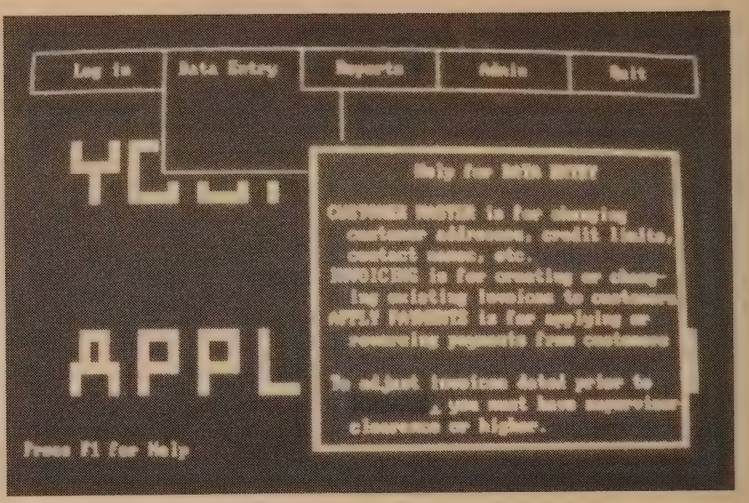


For People Who Don't Want To Learn A Database

peopleBase is designed for use by professionals who need to keep track of and correspond with large numbers of people. Using pull down menus, the user can select someone from a list of people due to be called, review their correspondence history, auto-dial the phone, update the history and print a personalized letter. The user can also manage mailing lists, print labels and form letters for selected groups of people, print custom lists and analyze numeric data stored in the database. It is intended for users looking for a system that does not require a great deal of effort to learn and use. Prices range from $39 to $129 depending on the size of the database required. High Caliber Systems, Inc., 165 Madison Ave., New York, NY 10016 (212) 684-5553.



DataFlex Is A Flexible Database Management System

The newest version 2.2 of *DataFlex* includes pop up help screens and pull down menus that can be incorporated into your *DataFlex* applications. *DataFlex* offers full and easily programmed control over the size, color, and location of each page and allows each to be displayed without disturbing on screen data. A new command allows temporary suspension of a *DataFlex* application in order to run any other program or DOS command. It then allows you to return to *DataFlex* at the point where you left off. *DataFlex* applications can run on over 30 single user, multi-user and LAN operating systems. Other new features include windowing, the support of MS-DOS and UNIX file and directory pathnames conventions, and the ability to read *dBASE* files. Data Access Corporation, 8525 SW 129 Terrace, Miami, FL 33156-6565. (303) 238-0012.

FoxBASE Offers Database Upgrade Path To The XENIX Environment

The Santa Cruz Operation's *FoxBASE+* offers an upgrade path to those *dBASE III Plus* users who wish to move to the XENIX multi-user operating system. *FoxBASE+* offers source-language and data-file compatibility with *dBASE III Plus* and identical record and file locking syntax. It also has a virtually identical user interface. The full power of unrestricted dot-prompt mode is available, permitting the use of familiar

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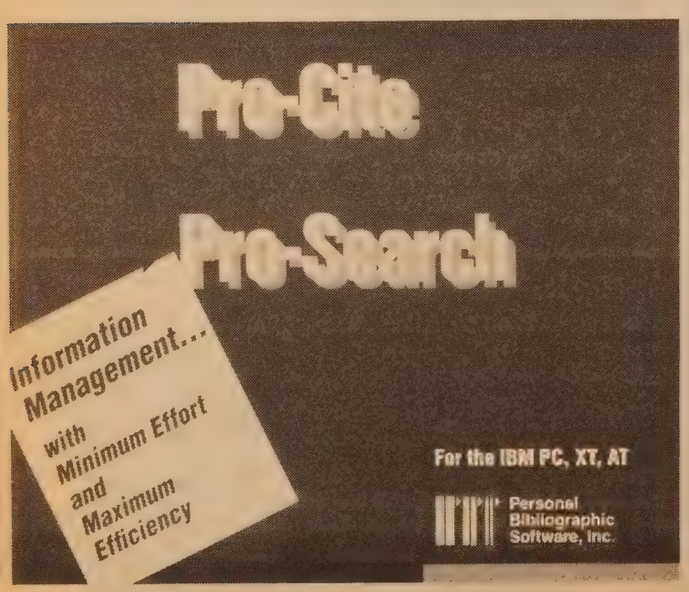
commands, including BROWSE, EDIT, APPEND, MODIFY STRUCTURE and MODIFY COMMAND. *FoxBASE+* also offers extended programming features such as 14 times the number of memory variables offered by *dBASE III Plus* and four times the number of procedures per procedure file. ($795) SCO, 400 Encinal Street, P.O. Box 1900, Santa Cruz, CA 95061. (408) 425-7222.



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Pro-Cite, *Pro-Search* and *Biblio-Links* comprise Personal Bibliographic Software's Searcher's Toolkit. The system provides on-line database searching, records transfer and personal database management. *Pro-Cite* is a bibliographic database and text management system designed for the information professional. *Pro-Cite* will sort, search, index and format bibliographic records in any style desired. *Pro-Search* is a front-end online searching aid to BRS and DIALOG. *Pro-Search* is menu or command driven depending on the desire of the user. *Pro-Search* can also be used as general communications software to access any other online system. *Biblio-Links* will transfer records downloaded from an online database system directly into a *Pro-Cite* database. *Biblio-Links* is available for BRS, DIALOG, MEDLARS, OCLC and RLIN. *The Searcher's Toolkit* is priced at $995. Each module is also sold separately. A Macintosh version is also available. Personal Bibliographic Software, Inc., P.O. Box 4250, Ann Arbor, MI 48106. (313) 996-1580.

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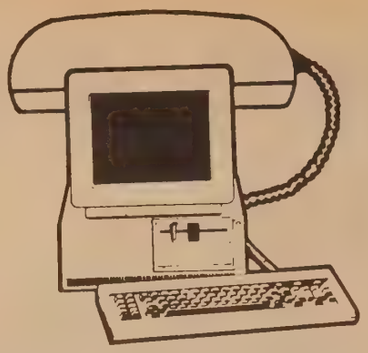

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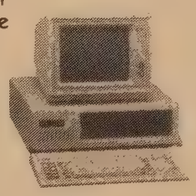

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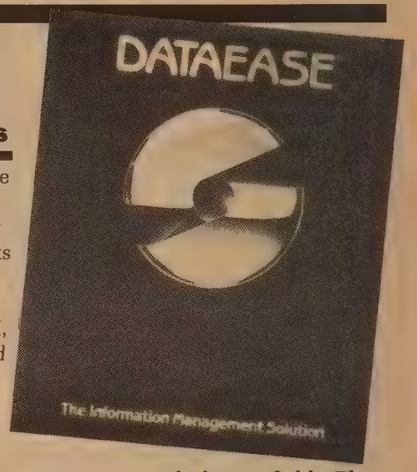

DataEase Allows Users To Create Database Applications With Menus

DataEase is a menu driven database that lets users write their own applications without knowing how to program. *DataEase*'s input formats include DIF, ASCII, dBASE II, dBASE III and WKS (*Lotus 1-2-3*) among others. It exports DIF, ASCII, WKS, *Mail-Merge*, *Multimate*, *Word Perfect* and more. *DataEase* allows you to organize all your forms and reports by setting up your own menus. Multiple levels of menus can be set up, and each class of users can use a different set of menus. The menus also provide the facility to chain a number of actions from the same menu selection. The database is based on forms which are comprised of many fields. The user can create simple or complex reports using the data stored in the fields. DataEase International, Inc., 12 Cambridge Dr., Trumbull, CT 06611. (800) 243-5123.

Programmers Plus Edition Of SilverComm Complements Clipper Edition

SilverWare Inc., has added the *Programmers Plus Edition* to complement its *Clipper Edition* of *SilverComm*. *SilverComm* is a comprehensive communications library for *Clipper*, *dBASE III Plus*, *FoxBASE+*, *dBXL* and *Quicksilver*. It gives programmers the tools to design robust interrupt-driven communications applications with simultaneous buffered input/output to both COM1/COM2 at baud rates up to 19.2K baud. *Progammers Plus Edition* provides database programmers with an excellent environment for doing disk I/O, keyboard input and screen/printer output. The programmer can control mainframe communications, electronic mail systems remote updating and stock exchange information queries among others. ($149.95) SilverWare Inc., P.O. Box 781143, Dallas, TX 75378. (214) 902-0227.

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Assembly B2CS Analog II Computer System
Effective Date 04/14/87 Total Unit Cost 721.158
Last Revised 04/14/87

Seq	Item	Unit Cost	Quantity	Scrap	PerUnit
100	CASEXCB01981000 Case, XCB Type System, Model 1981	67.500	1	0	Y
200	PSUPP0140-PC002 Power Supply, 140 Watt, Type 2	1.110	1	0	Y
300	AGSM ABC 12" Green Screen Monitor	200.000	1	0	Y
400	A2EW Analog II Exterior Wafer	81.920	1	0	Y
500	D360-TEAC005500 Floppy Disk Drive, Teac, 360K	84.500	2.45	0.00	Y
600	PCB001002328937 PCB, Analog II Motherboard, Popult	132.500	1.75	0.00	Y

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Edit mode for Assembly Number ⟹ B2CS

dMaterials Is Integrated Into SBT's Database Accounting Library

dMaterials from SBT is a comprehensive time-series inventory management program interfacing with other modules in STB's Database Accounting Library. Its capabilities include work order entry and file maintenance, inventory file maintenance and bill of material processing. *dMaterials* was designed to provide a modifiable time-series manufacturing management program to handle inventory, labor capacity and outside services. It automatically explodes orders into detailed labor, materials and capacity requirements by time period for six upcoming months. Includes *dBASE III Plus* source code for user modification. $595 for multi-user configuration, $395 for single user. SBT Corporation, One Harbor Drive, Sausalito, CA 94965. (415) 331-9900.

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Your PC As A Fax Machine

By Ken Milburn

I have a modem hooked into my PC, and every story or column that goes into my computer gets transmitted straight to my editors that way. But it's not enough. Usually I have to mail screen shots on disk or film. Sometimes I have to plot or print an illustration and FedEx it overnight to get it there on time. Almost every column means sending a signed letter of "request for product" to a publisher or manufacturer. Since they require a signature (and sometimes a clipping or two), the modem isn't much good for that either.

These are situations that the standard Hayes-compatible modem and a PC just can't face (at least not very elegantly). You probably have similar situations in your business.

A facsimile machine could solve those problems, but good ones cost upwards of $3,000. Also, to use one to send a document, I have to go through extra steps to produce hard copy before I send it. Finally, if I receive a fax from someone else and want to get the data or graphics back into my computer, I have to buy a scanner and go through yet another step.

So I started looking into the possibility of using a PC expansion card. Since most of them list for under $1,200, I could buy a scanner and still save a grand off the price of a fax machine.

For once, the reality turned out to be better than the dream. Turns out you can integrate the card not only with your PC, but your scanner, desktop publishing software, drafting and illustrating software (any business application that can produce an ASCII file) and with your laser printer.

One reason the idea makes so much sense is that fax uses the most well-established and compatible world-wide data-communications network available today. Almost all (98%) of the fax machines in existence, whether computer-controlled or standalone, use a single communications standard, CCIT Group III facsimile.

The PC can automate and integrate facsimile to such an extent that significant productivity increases over standalone fax machines are realized. Even when surrounded by a computer, fax is much easier to use than other forms of computer-to-computer communications. Images received through computer-resident fax automatically have the potential to be edited and manipulated by the computer's software, eliminating re-drawing, re-keying or re-scanning.

Fax is an especially effective means of transmitting data in the graphics community because the files are always bit-mapped images at relatively high resolution. Add-on software for some systems will convert a received file to either machine-readable text or to a variety of graphics formats (including *AutoCAD*-compatible drawings).

Copyright ©1987 by Ken Milburn. All rights reserved. *Ken Milburn is a freelance writer on Microcomputers. His articles have appeared in numerous computer publications, including* PCWorld, InfoWorld, Computer Graphics World *and* MicroTimes. *He also does system configuration for small businesses. He can be reached at (415) 331-6926 or by sending E-mail to (ken) on the WELL, (415) 332-6106.*

FAX OPTIONS

There are three basic levels of flexibility when it comes to the electronic transmission of drawings via facsimile: standalone fax machine, computer-controlled fax, and computer-controlled fax used with a laser printer and scanner.

Standalone machines simply transmit an image of a legal or letter-size page to another facsimile machine. The image of a full page can be sent anywhere in the world in less than 30 seconds. It is of no consequence whether the image was made by a pencil, typewriter, camera or whatever. Image quality varies from machine to machine, but the differences are due to the mechanical capabilities of the hardware at either end of the transmission. Dot resolution is standardized for CCIT Group III fax at either draft-quality (200 × 100 dots) or "high resolution" (200 × 200).

An order of magnitude is added to potential productivity and cost-savings when the facsimile machine is integrated into a desktop computer. The computer can automate transmissions so that numerous messages can be sent during low-cost transmission hours and to numerous recipients, all unattended. That saves labor costs, as well as phone bills.

There's no need to print hard-copy in order to send a fax. Images composed on the PC can be sent directly, and could even be interactively edited at remote locations.

Unfortunately, computer based fax can't read paper documents unless a scanner is attached, and only the more expensive 24-pin dot matrix printers can approach the level of hard-copy quality of a self-contained unit.

Adding a laser printer not only offers superior resolution, but glamorizes the paper copy by printing it on whatever bond you choose. Usually, the fax software includes some means of further enhancing the image, either by editing it in a "paint" program or by algorithmically converting it from 200 to 300 dpi. (Versions of either *Dr. Halo* or *PC Paintbrush* are included with most fax boards).

The integration of fax card, scanner and laser gives you all the advantages of both standalone and PC-based fax—and much more. Sending scanned material directly through the fax software to the laser printer gives you a low-volume photocopier. You can bring all the power of a complete graphics/publishing workstation to bear, both in composing documents for transmission and in manipulating and enhancing received images.

BELLS AND WHISTLES

The precise amount of synergy in such a combination will depend on the features and compatibility of the specific brands of components and software used in such a system.

Wouldn't it be wonderful if a field engineer could transmit a sketched detail from his location on the South American project to the PC at the home office in Albuquerque, where it was automatically converted to an *AutoCAD* file, edited into final form and instantly re-transmitted back to Rio?

Such a scenario is doable. Microtek's *CADMate*, a software utility, will convert any image scanned by Datacopy or Microtek scanners to .DXF format drawings, which can then be used by most PC-based CAD packages. Better yet, if you have Advanced Vision Research's turn-key scanner/fax/laser system, the image can be converted from raster to vector directly from the fax file, eliminating the need to re-scan.

The same engineer could also transmit his typed notes, along with his sketch. Chances are, the home office needs to incorporate those notes into other reports. Many scanners can be had with Optical Character Recognition software (usually at extra cost). Ideally, this software could eliminate the need for retyping the transmitted report.

However, it's important to note that OCR software varies greatly in its ability to recognize typewritten or typeset characters. Most will recognize only a few Courier and Prestige (evenly spaced) fonts. Some, like Datacopy's *OCR Plus*, can be user "trained" to recognize virtually any computer- or typewriter-produced typeface. Trainability is important for another reason: PC-based fax must automatically compose bit-mapped fonts when generating a transmission. Non-trainable OCR software may not recognize the characters generated by another user's fax card. Conversely, you'll want to be sure that the characters generated from ASCII files in your own system are commonplace enough to be recognizable by "dumber" OCR software at the destination.

Most OCR software is scanner-based, which means that you'll print the fax and re-scan it in order to avoid re-typing. In the process, you run the risk of losing definition—so the OCR software may misinterpret characters.

A few manufacturers can provide software that recognizes characters from the fax card's preview screen. The best example we've seen of this is Advanced Vision Research's, which can even be trained to recognize (neat) handwriting and a

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There's also a great deal of variation in the capabilities of the fax cards themselves. Some cards have on-board processors that allow them to perform their services at the same time the computer is being used for full-time design or business chores. Others will run in the background, but at an increased cost in RAM overhead—it will also slow the processing of other tasks by sharing time with the processor. Still others stay memory-resident (like *SideKick*), until they are called with a Hot Key.

Then there's the possibility that you may not want the board and its attendant software to work unless it's the foreground operation. This will be the case if you don't want to install a separate phone line or can't afford even the small amount of system overhead that "smart" concurrent boards impose.

Even boards that don't process in background can do so in conjunction with a multi-tasking system like *Windows* or *DesqView 2.0*. All PC-based faxes, like their dedicated brethren, will "poll" the machine being contacted to see if it's ready to accept a fax. Cards that run in the background will also allow themselves to be polled.

Several of the fax cards we surveyed will automatically place calls and transmit documents to a list of recipients. Called "broadcasting" in the fax vernacular, this process shows varying degrees of refinement. The most sophisticated systems can be programmed to automatically broadcast at a specific time of day, unattended, and can handle multiple lists and documents.

Some cards let you select any number of files for sending to any number of phone numbers. Others let you send multiple files to multiple destinations, but severely limit the number of files/phone numbers you can designate.

Some PC/fax systems can combine images from several files into a single file, so you could place the same signature and letterhead on any number of documents. Or you could scan a drawing and place it on the same page as notes from another file. Some can even automatically place letterhead and signature above and below text as the fax software is translating from an ASCII file.

STILL A FEW PROBLEMS

Since the bit-mapped images which form facsimile-transmittable files can be quite large, images must be compressed to further speed transmission. Of course, the elegance with which this is done varies from brand to brand. The most desirable systems automatically compress a file before they dial the destination facsimile machine. Some systems automatically compress while the image is being sent and decompress as they are receiving, but this makes the transmission take longer. The most basic systems require that you separately specify compression before transmission and de-compression before editing.

A few fax cards require the use of one of your computer's serial ports. Although DOS 3.3 allows up to four serial ports, those who haven't updated will find themselves with but a single port left over for their pointing device and plotter or laser printer.

Furthermore, it's easy to find yourself "slot-bound." For instance, the Datacopy system requires slots for both the fax card and scanner.

If you're on a single phone line that you use for both voice and fax, it's best to be able to dial and send manually. The Datacopy card, for instance, lets you call another party, tell him you're ready to send and then punch a key to start sending when the receiving machine is ready. After sending, voice will re-connect, so you can continue your conversation. Cards without a similar feature might require the use of a dedicated line in order to be practical, since no one wants to open their machine or disconnect cables just to send an occasional fax.

SOMETHING COMPLETELY DIFFERENT

When last we met, via this column, I promised a new column on graphics for business. Well, the best-laid plans of mice and men sometimes go astray. A new contractual arrangement with another publication prevents me from delivering any additional columns. So we'll continue to talk about graphics frequently in this column, along with other matters of PC synergy.

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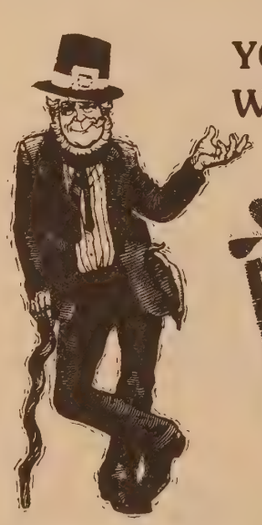

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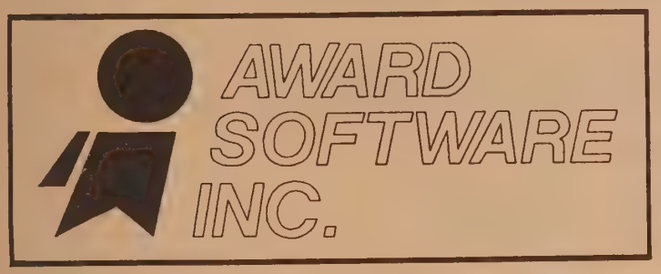

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Paging Dr. Memory:

Memory Management Concepts

By Bennett Falk

"What makes it so difficult to run UNIX on a PC?" This question seems to be about the limitations of microcomputer hardware (not just IBM-PCs and compatibles, but any single-user micro). It's a question with lots of glib answers: "The PC's hard disk is too slow," for example, or simply "Well, PCs just don't support multi-tasking; they can only do one thing at a time."

There are other earnest seekers after truth on the other side of the fence: "Why, if UNIX and the computers that run it are so great, is it difficult to run DOS applications on UNIX systems?" This appears to be a question about software design. It doesn't really have a snappy comeback, and is likely to provoke the disgruntled guru to take refuge in some arcane "awk" script.

Both are vexing questions. In spite of appearances, they are about a single, rather dry topic: memory management.

MEMORY MANAGEMENT

The use and allocation of your computer's memory requires intricate coordination of both hardware and software. Processors expect to see memory addresses in a format of some kind, a "logical address," which can be manipulated in CPU registers and turned over to memory boards to find the referenced location in physical memory.

The programs you execute contain addresses that make possible branching from one part of the program to another, and they expect to be positioned in memory in a certain way. The addresses your program contains must make sense to the CPU (usually it is the responsibility of the compiler that produced the program to assure this), and the operating system must load your program in such a way that both the CPU and your program agree on where things are in memory.

The respective memory management strategies of DOS and UNIX contribute more to the distinctive character of these operating systems than most users realize. By keeping memory management structures to a minimum, single-user systems can give users more immediate access to hardware resources.

On the other hand, the UNIX computer's ability to do several things at once depends largely on the peaceful coexistence of programs in memory. Indeed, multi-tasking is in some sense illusory: the processor never does more than one part of one thing at a time. The amazing thing about multi-tasking is that programs are kept in memory without interfering with each other.

Copyright ©1987 by Bennett Falk. All rights reserved. *Bennett Falk lives in the East Bay, works with computers and writes when time permits.*

Because DOS programs are assured of having uninterrupted access to both memory and the CPU, each program can do its own memory management. Except for the first loading of the kernel when the system is booted, however, any program that is loaded into memory on a UNIX system must share the computer's memory with other programs executing at the time.

DOS PROGRAMS AND MEMORY

DOS programs furnish a good example of how single-user memory management is done. There are two kinds of programs in the DOS world, those having the file extension ".COM" and those whose extension is ".EXE". COM files are images that can be loaded unchanged into memory to be executed. The reason they can be loaded unchanged is simply that the program happens to require no more than 64K of memory to run, and it was arbitrarily decided that the computer itself would have no less than 64K.

EXE files, because they may require more than a single 64K segment of memory, contain a header that tells the DOS program loader what is needed so that addresses for the various components of the program can be patched into the program as it is loaded. This patching assures that the program will take advantage of any optional memory the user has installed.

In either case, however, the program runs in what is called "real" mode: the memory addresses the program needs are "hard-coded" into it (either by the compiler for "COM" files or at load time for "EXE" files).

DOS programs are generally loaded into the same area of memory, and any memory addresses the program might contain are real addresses. The CPU will interpret the address to refer to one and only one memory location, since DOS congenially allocates all memory to the program. Consequently, there is little need for the operating system to manage memory; because DOS programs are assured of having uninterrupted access to both memory and the CPU, each program can do its own memory management.

UNIX PROGRAMS AND MEMORY

UNIX programs, on the other hand, do not run in "real" mode.

Except for the first loading of the kernel when the system is booted, any program that is loaded into memory on a UNIX system must share the computer's memory with other programs executing at the time. The new program will be loaded wherever there happens to be space for it, and the program can't reliably know ahead of time where it will be situated in memory during execution.

If memory fills up, UNIX will make space for loading additional programs by momentarily swapping currently running programs to disk. The "swapped out" program is eventually reloaded into memory to continue execution, but again, it will be reloaded wherever space is available. (An alternate strategy for maintaining on disk a portion of the programs currently executing in memory is called "paging.")

As if this weren't complicated enough, it's also common for several users to run the same program simultaneously, typically each with a separate copy loaded into a different section of memory.

THE VIRTUAL CONSPIRACY

These features of the execution environment for UNIX programs require more elaborate memory management than is provided by most single-user microcomputers and their operating systems. Like their single-user counterparts, UNIX programs must have some way of addressing memory, but the addresses the programs contain cannot be the real addresses of locations in

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physical memory.

The compiler producing a program to be used on a UNIX system builds the program around memory addresses that refer not to physical memory, but to a hypothetical memory in which the program could run comfortably. The program is constructed assuming a "virtual address space."

The program itself has no idea that the memory it addresses is virtual and not real. A UNIX program will "manage" its virtual address space in much the same way that DOS programs manage physical memory: as though no other program were executing in that space at the same time.

When the program is run, UNIX becomes a co-conspirator with the compiler and performs two services behind the back of the program in execution: it coordinates the program's virtual address space with physical memory, and sees to the orderly satisfaction of the demands for memory from all the programs running concurrently.

IMPLEMENTATIONS

How and where virtual addresses are mapped to locations in physical memory will vary with hardware. The address translation could be done entirely by the UNIX kernel (that portion of UNIX that controls the hardware). Independent of any user's program, UNIX maintains a number of tables which describe not only the memory requirements of currently active processes but the layout of physical memory as well. Address translation could be performed using these tables with no special assistance from the hardware.

Of course, if the UNIX kernel, which must share the CPU with all other processes on the system, is solely responsible for address translation, performance will suffer. UNIX is almost unbearably sluggish on machines like the IBM PC (based on the Intel 8088). Performance is acceptable on PC clones based on the 8086 (ATT's 6300, for example), but lacking hardware support for extended memory, the native 1MB address space of the 8086 seriously limits what could be done on such a system.

If the UNIX kernel, which must share the CPU with all other processes on the system, is solely responsible for address translation, performance will suffer. UNIX is almost unbearably sluggish on machines like the IBM PC (based on the Intel 8088).

One strategy to improve performance uses a separate hardware component (a Memory Management Unit or MMU) to perform address translation. Currently this is the favored strategy for computers using the Motorola 68000 family of processors. The UNIX kernel simply notifies the MMU of the location of the tables describing each process and the layout of physical memory. Thereafter, the MMU handles all address translation freeing both the kernel and the CPU for other tasks.

The Intel 80386 chip takes this strategy one step further by enlisting the processor itself in the virtual conspiracy. With the 386, memory management functions are built into the processor itself.

Finally, what can be said about the questions posed at the outset? On the one hand, there is nothing intrinsic to personal computer hardware that makes it impossible to run UNIX. UNIX itself is capable of performing the necessary memory management to allow multi-tasking on these machines. The limiting factors for running UNIX on personal computers are performance expectations and the increasing size of UNIX programs as the operating system continues to develop on computers with generous allocations of both memory and disk.

The problem of moving single-user applications into a UNIX environment is more delicate. The conventional (and labor intensive) solution is to port the application to UNIX: move the source code to a UNIX machine, modify it as necessary to suit the hardware and and the compiler, and then re-compile it, in effect producing a different product. Because UNIX memory management has relied increasingly on hardware, however, no one has been eager to invest in such a solution. There is instead some prospect that hardware developments could make single-user applications runnable under UNIX in their present form. With the appearance of the 386 and its support of a "virtual 8086" this far-fetched sounding solution not be so unreasonable. Perhaps we live in interesting times. □

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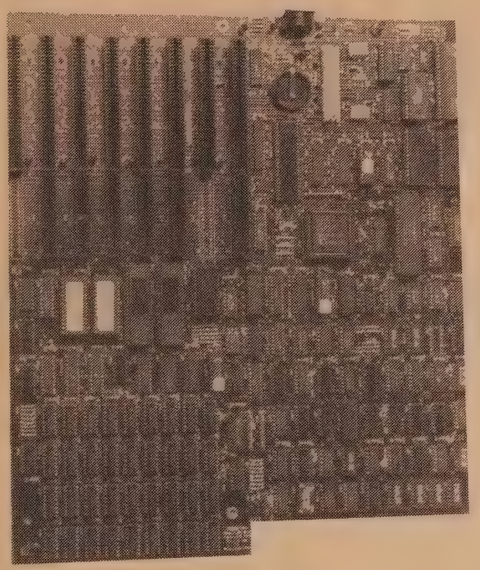

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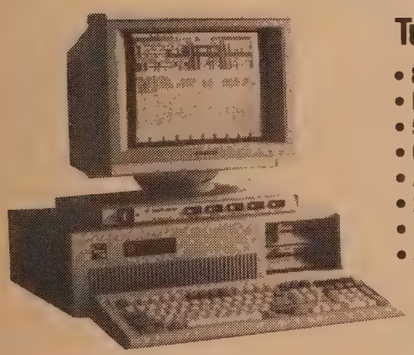

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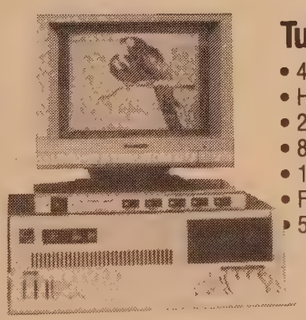

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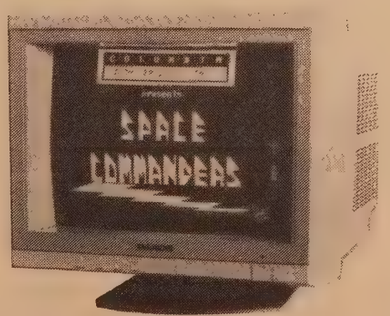

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And Then There Were None

By Brock N. Meeks

I submit that, in this age of high-tech, high-touch, a new "right" should be defined: the right to low-cost access to information.

There is not a moment to waste.

On June 10, 1987 the FCC issued a Notice of Proposed Rule Making (NPRM) that will, on January 1, 1988, push the cost of information access into the stratosphere and guarantee the creation of a new social class: the "information poor."

These information poor won't be able to dial into computer databases or commercial online services simply because they won't be able to afford them, not because they don't want them. We're close to that situation now, given the current cost of information access, but with the promise of a dramatic rate increase looming on the horizon, the future looks grim.

The FCC proposal calls for assessing an additional charge of about $5 an hour for computer telecommunications services that offer enhanced services, such as those provided by U.S. Sprint's Telenet and Tymnet. These enhanced service companies are currently exempt from access charges. The FCC proposes to eliminate this exemption.

If the exemption is eliminated, you can take the price you pay for every hour of connect time and jack it up by at least five bucks, and probably much more. (Five dollars would likely be the charge if these services just passed on the increase to their users; in reality, they will probably raise charges even more to cover administrative charges.)

"If this proposal were to go into effect, our country's blossoming information age could whither and die without ever fulfilling its heretofore bright promise," says Paolo Guidi, president of Telenet. Educational institutions will also be harmed, according to Guidi, because "they are just now beginning to have affordable information services made available to them."

A MATTER OF EQUITY

FCC attorney Ruth Milkman told the Commission at the June 10 meeting that the basic theory behind the removal of the current access charge exemption is that if enhanced service providers use local networks to provide interstate services, they should pay for the same access and contribute to cost of facilities in the same way as providers of voice services.

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Brock Meeks is a San Diego-based freelance writer and modem minuteman.

Milkman adds that the commission realizes that imposing the fee on computer services would not offset the charges on long distance carriers. Rather, she says, the FCC merely wants all carriers to pay an equal share for use of the local telephone exchange.

The Commissioners were in agreement that the crux of the access charge issue is "a matter of equity," as stated by Commissioner Mimi Weyforth Dawson during the June 10 meeting.

"The bottom line here ... is that we want the networks to evolve ... in response to a consumer demand ... not to various subsidies and anomalies," said FCC Chairman Dennis Patrick during the agenda meeting. He added that the information service providers have had plenty of time to get used to the charge and would "bear a heavy burden" to prove they could not deal with it.

"We're currently paying about 30 cents an hour, effectively, for dial-in access," counters Philip Walker, a vice president for Telenet. "We buy an ordinary business line for about $30 a month. And we use it about 100 hours. Under [the proposed] access charges, that same dial-in hour of use would cost us about $4.50; that's a factor of 15 increase." What will Telenet do with that added charge? "Pass it on to the consumer; we can't absorb that kind of rate increase," says Walker.

TELECO MATH 101

Consumer advocate groups are backing the ruling because they believe it's time that "data users pulled their own weight," according to Sam Simon, president of Issues Dynamics, Inc., a telecommunications policy firm in Washington, D.C. "The proposed access charges are considered common carrier line charges for fixed costs; that is, the cost of the local phone companies to maintain their equipment."

"After all," says Simon, "voice users, for years, have been saying they are subsidizing new costs to handle data line traffic, costs for services they neither want nor use.

"When the BOCs [Bell Operating Companies—local telephone companies] start getting increased revenues from charges on enhanced services, that money will go for fixed costs. As this happens, overall charges will go down, and eventually, the access charges, as well."

Think again, Sam. Let's do some math, and it's rather simple math at that.

According to figures obtained from the FCC's traffic analysis branch, long-distance, interstate voice calls rack up 115 billion "conversation minutes" a year. Figures obtained from public records and conversations with officials at various enhanced services put interstate data use at 2.8 billion minutes of data usage a year. Mark Uretsky, a financial analyst with the FCC's traffic analysis branch, says that data usage "certainly isn't any bigger than 3% of the [long distance] voice figure."

A simple turn of the crank on your adding machine shows that our figures set data usage at 2.5% of voice use, a figure that's even less impressive when you consider that the revenue generated from this extra 2.5% is spread across all of the BOCs.

That 2.5% doesn't go very far to maintain those fixed costs. Further, the increased overhead to administer the extra revenue will cut deeply into the 2.5% figure, so the actual increased revenue to BOCs is a somewhat meager 1%.

That 1% is not substantial enough to cause the FCC to call for a lowering of access charges. (When the BOCs are treated to larger revenues, it's been the Commission's policy to then decrease interstate access rates. However, with only a 1% increase, the FCC is not likely to require a lowering of access rates). Without a lowering of access rates, the BOCs are handed a windfall profit. Merry Christmas.

The BOCs gain; everyone else losses. Long distance voice users don't get lower rates, and data users are handcuffed into paying an astronomical rate increase. And for the privilege of paying higher rates, data users don't get *any* increase in quality, quantity, or performance! But to the advocates of this proposal, these facts are secondary.

Simon, although agreeing that data users will feel a crunch in their wallets, says: "This applied access charge is the only 'fair' thing to do. It makes everyone pay their own way. Equity, not the bottom line, is the real issue here."

What Simon and other advocates don't realize is that the ruling will actually create an environment of *inequity* and discrimination.

BITSTREAM DISCRIMINATION

One of the potential loopholes in the proposed ruling is the creation of private networks as a bypass. Because there are comparative characteristics of such private networks that perform similar tasks as enhanced service providers, such private networks are likely to be the center of debate during the comment phase of ruling. (By law, the FCC must solicit comments from the

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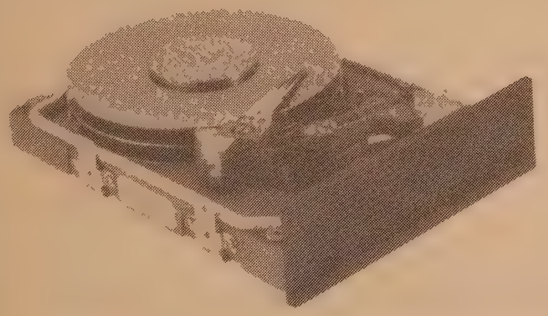

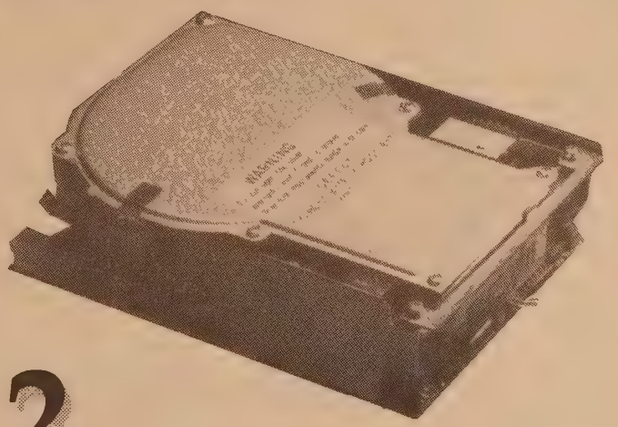

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public and the industry on any proposed rulings. After the initial comment phase the FCC then re-evaluates the proposal while sending copies of all comments to anyone that provided initial comments. A second round of comments is then worked through before the Commission sets the proposal into law.)

Given the potential for private networks, the FCC is likely to be asked to consider what will be the difference in function between electronic mail provided by Telenet, for example, as opposed to one provided internally or through private lines, such as the nationwide private computer service run by General Motors.

According to FCC attorney Milkman, the determining factor for applying access charges will be whether switched facilities will be used, such as those used to connect CompuServe or Telenet facilities with the user. No access charges would be assessed if no switched facilities are used, she says. If an entire intracompany network, used to provide enhanced services within the company, was on private line, or used no local teleco exchange facilities at all, no access charges would be assessed.

"So what this ruling does is set up an inequity among all data processing providers, e-mail providers, or whatever," says Telenet's Walker. "Large companies and information providers [able to afford private lines] are exempted, while those not able to afford their own networks get banged on."

INDUSTRY IMPACT

Access charges will likely kill innovative services like PC Pursuit and Tymnet's fledgling PC Express network. "These types of services will not be possible under the proposed ruling," said Walker. "We couldn't continue to offer [PC Pursuit] at the current rate." (PC Pursuit presently costs a flat $25 per month for all the online time you can use during non-prime time hours.) Services like PC Pursuit are only possible because users are not "on the clock" when they go online.

Joseph Markoski, counsel for ADAPSO, a trade association of data processing services, rejects the idea that enhanced service providers (which now pay a subscriber line fee and local business line charge) should be subject to the so-called Common Carrier Line and traffic sensitive charges imposed on long distance companies. He maintains that they are users, not telephone companies.

WRITE. NOW

And then there were none.

That could be the information age epitaph of 1987, the end of low-cost (or at least semi-reasonable) information services. Fortunately, there is already a groundswell of online activism set in motion on this issue, a signal to Washington that data users are a segment of the population to be reckoned with.

The FCC is accepting comments on the ruling. *Write to them now.* Tell them what you think of the ruling. You can file your comments by writing to:

Federal Communications Commission
Office of Opinion and Review
The Secretary
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

Refer to "Amendments of Part 69 of the Commission's Rules relating to Enhanced Service Providers CC Docket 87-215." For more information you can call the FCC at (202) 632-7000. □

How To Reply To FCC Dockets

At presstime, the FCC had not yet released the docket on this issue. It may have done so by the time you read this. Check your online services daily for updates.

What follows is a net posting by Bruce Bergman of San Diego, uploaded to The WELL by Brock Meeks and printed by permission of its author. The validity of its content was verified point by point by Brock Meeks in a conversation with FCC attorney Ruth Milkman.

Ms. Milkman cautions, however, "The full text of the notice isn't available yet; it hasn't been released, it's been adopted. What usually happens is that the Commission adopts it in principle and then it takes a while to get printed and out.

"I think it's probably more effective if you wait for the text of the notice and wait and file your comments as formal comments. If you send them in now we'll treat them as informal comments and put them in the public file, which is not quite as effective. It's not as useful if you make comments without reading the notice first."

She adds that a summary of the notice will be published in the Federal Register, but that the public will have to pay for copies of the full text. For further information, call the FCC at (202) 632-7000.

—eds.

The following is a do-it-yourself-kit for responding to FCC docket 87-215 regarding amendment of Part 69 relating to Enhanced Service Providers.

Before I get started with the actual letter, let me take this opportunity to make a few comments regarding responding to the FCC. In my experience, the following information is useful and important to the success of your response.

1. If you really want to make an impression on the Commissioners, **send more than one copy of your response.** Send **five** copies. If you want to make an even better impression, send **eleven** copies. Five copies makes sure that your vote counts and provides a copy for each of the general groups. Eleven copies will get your document in the 'IN' basket of each Commissioner. If this isn't possible, even **one** letter counts as a vote. Don't send more than 11. Just 11 will do.

2. Don't send form letters. Form letters are usually not worth the effort you put into them. Why, you ask? Well, while each form letter you send gets counted as a vote, it can be rejected later. If it turns out that we win this round, it is entirely probable that **our opponents will ask to go through each and every response.** If they can show that 100 responses are identical (or closely similar) with the exception of the signature, **the 100 responses can be reduced to only one vote!** Make sure your letter is sufficiently different not to get caught by this.

3. Limit your main arguments to one page. If you want to go into more detail, augment your document with additional pages expanding on your original comments, keying to those original points. Number your points.

4. Give **reasonable reasons** why you oppose this docket. You can't just say that you oppose the rule-making without a sound, reasonable response. **Remember that the opposition will read each and every response you send,** if it can benefit them. We don't have that type of financial backing; they do.

5. Make a statement about who you are and what you do. If you have a certain expertise, or if you have a degree of some sort, **tell them that.** It counts a lot for what the commissioners think if they know you are someone who knows what you are talking about. If you run a service, are an administrator, offer services to the public, etc., briefly describe what you do and why.

6. Double-space your document. This can make the difference between your response's being read or just counted! If your response is clear, double-spaced, and concise, it will be read and given a better subjective value.

7. Get your neighbors into the act. If your friends and/or neighbors are familiar with and support you and your activities, ask them to write a letter to the FCC expressing their concern over how this docket might affect your community. If you can get local officials to do the same, great! Letterhead and many copies make the **best** response.

8. Make sure the date is on the document. It is important that the reader be made aware that this isn't an old response. Put the date on your document.

And, of course, don't ever forget to put the docket number at the top!

Lastly, remember that this is going to be a very important point in future rule-making efforts. Any time the FCC wins a battle, whether by apathy or some other means, it is a big step for them in the future. If the FCC decides in favor of this docket, it's likely that you will see more of the same type later on. Private agencies will see how easily it went over and base future requests on that information. If we win, it will make it tough for anyone to raise the issue again. If a specific proposal fails to make it through a certain number of times (because of the public's efforts), the commissioners tend to not reconsider it again during their term.

THE LETTER

Basically, you will want to create a letter which has the name of the FCC at the top, **as well as a clear pointer to the docket number.**

Here's a sample first page header:

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington DC 20554

In the Matter of GENERAL DOCKET 87-215
Amendment of Part 69 of the
Commission's Rules relating to
Enhanced Service Providers

TO: The Commission
COMMENTS OF [your full name], [any professional titles]

After you have created the header, you can begin your text, **double-spaced.**

Begin by expressing who you are and any specific titles, duties, or responsibilities that might qualify you as someone who has a vested interest in what's going before the FCC's consid-

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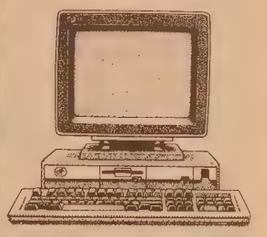

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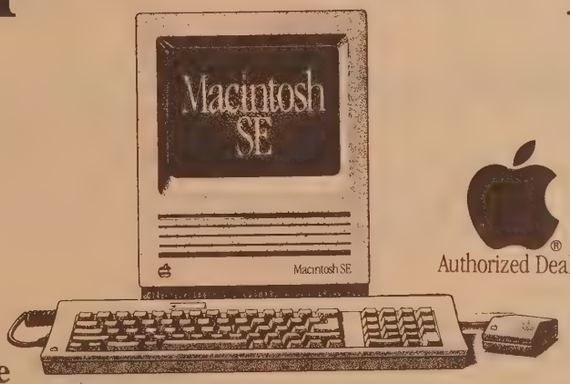

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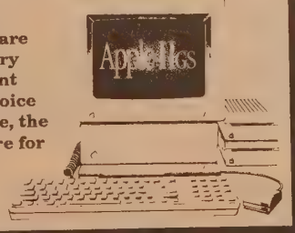

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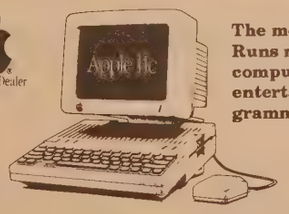

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eration. Even stating that you're a user of a network is suitable. Now is not the time to be humble, however. Just tactfully explain what makes you significant to this proposal. **You're out to make an impression. Do so!** (Don't be verbose, however.)

Then, begin listing the reasons (numbered) **why** you oppose this proposal. The more reasonable, the better. Be concise and clear. If you need to go into detail, refer the reader to attached pages.

Here's an example:

I am a user of an Enhanced Service Provider. I frequently make use of such services to obtain information from computer information services that would otherwise be unavailable to me. The information I obtain allows me to [something . . .].

After you've explained who you are, and have shown why you have an interest in this docket, continue with:

I strongly oppose the Commission's proposal to surcharge Enhanced Service Providers for the following reasons:

1. [reason one]
2. [reason two]
3. [whatever comments you feel appropriate to your situation]

Remember, you don't need to be verbose to get your point across. You want to make sure the reader understands why you feel the way you do. If you need additional material in order to accomplish this, feel free to include additional pages; however, if you are only interested in making your feelings known and don't want to get really in-depth, the simple statements like the ones pictured above are sufficient to make your point.

Where you can refer to the text of the original document, do so! This is great for those who like to know exactly what you are referring to. It also shows that you have done your homework and are not just spouting off.

The best mode of attack in instances like this is to first explain why you are against the proposal. Once you have made it clear that there are good reasons why this wouldn't be a good thing, suggest alternate ideas. It can go a long way towards helping your arguments if you can suggest a viable alternative.

Finally, follow up your reasons with a nice suffix like:

Respectfully submitted,
[sign in BLACK INK]
[your spelled-out name and title]
[your street address]
[your city, state, and ZIP code]
[THE DATE]

Black ink is important when you sign your response. Also, make sure that you send the original. Copies for yourself, originals to the people you are writing to. Make sure you sign and date your letter.

If you have included additional pages, it would be wise to include a trailer at the bottom of each page, designating what page out of the total number of pages this is. Example:

Responses to General Docket 87-215
Page 1 of 3

Finally, place a return address on your envelope, place the correct postage on it, and mail it soon. If you can spend the extra cash, don't fold your responses; mail them in a larger manila envelope and keep them flat. This is especially useful if you are sending multiple copies. Chances are that it will get there in one piece, and will look great sitting on the desk of some Commissioner (flat).

The key point to remember is that you are out to make a valid point about the docket. You don't want to sound like you don't know what you're talking about, so be sure of your facts. You can best do this by being concise, clear, correct, and impressive. The impressive part comes to bear when you consider arrangement and looks of your document as well as your status in the topic under consideration. □

—*Bruce Bergman*

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IBM TYPE CARD

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My Mama Didn't Raise No Accountant

By Warren Sirota

Over the years, I've had a wide variety of database projects come my way, touching on subjects as diverse as animal husbandry and mainframe system performance analysis. However, the one subject that keeps coming back like a bad penny is Accounting (I did it! I said the "A" word).

Friends, I'm a programmer. If I wanted to be an accountant, I'd go get an MBA, learn double-entry techniques, and buy some non-paisley suits and ties. As it is, I'm more interested in tricky algorithms and clear user interfaces than in proper accounting procedures. My only concern with accounting issues, and possibly yours as well, is to deal with them when they come up in an efficient and professional manner, without re-inventing the wheel for every customer.

Accounting systems deal with the flow of money, so it is critical that they be reliable, complete, and "in accordance with commonly accepted accounting practices." Such systems must deal with a multitude of details and must be thoroughly tested, and so can easily take months to develop. If your application has an accounting component, you might do well to adapt an existing package for your own use.

Accounting systems must deal with a multitude of details and must be thoroughly tested, and so can easily take months to develop. If your application has an accounting component, you might do well to adapt an existing package for your own use.

dPROFESSIONAL

For *dBASE* developers, SBT Corporation offers an attractive solution. They sell various accounting modules along with *dBASE* source code, which you can customize to your heart's content. Another programmer and I, together with a client, have recently performed such a customization. Under very tight budget and time constraints, we were able to successfully transform SBT's *dProfessional Time And Billing Accounting System* into a well-received system for managing parking lot accounts.

The system which we developed, by the way, is currently being marketed by Scott Business Computers, Inc. under the name *Lot Simple*. The point here is not to plug the product (I don't imagine that this column has many parking lot chain owners in its readership), but to point out that SBT has an interesting policy towards redistributing its code. If you are developing a product that is geared towards a specific vertical market, then you can probably become an SBT VAR (Value-Added Reseller), which allows you to distribute the SBT code as part of your application. You pay SBT a royalty on each product that you sell, which may be from 15% to 30% of the list price of the SBT product, depending upon how much of the code you've used. Before you develop your application, however, you should contact SBT to see whether it would consider the program a legitimate VAR product or a competitor to its retail distribution channels.

Lot Simple is a legitimate VAR application, because it is directed specifically at a particular vertical market. The use of the SBT accounting modules in the parking system turned out to be a marketing asset for Scott Business Computers. Tom Benson, President of Scott, reports that "customers had more confidence in the software when they learned that it was based on the SBT code."

THE dPROFESSIONAL MODIFICATION EXPERIENCE

dProfessional is a billing package modeled on the needs of a large law office, or even a collection of law offices (like all the other SBT modules, *dProfessional* can handle accounts for up to 99 companies). Our job, in customizing *dProfessional* to the needs of our hypothetical parking lot customers, was mainly to simplify and to change prompts and screen appearances. We found that, with several exceptions, most of the work in altering *dProfessional* was in understanding the program's capabilities, commenting out those that were irrelevant to the parking business, and changing some prompts to make them more understandable to our target market.

It was relatively easy to find the places where changes needed to be made for our application. There was one place where we made a change to program logic which resulted in some unforeseen side-effects, but we were able to remedy that with little trouble, once we noticed it. This just drives home the lesson that care always needs to be exercised while modifying programs, especially in testing the modifications.

Most of the modifications that we wanted required a little thought, but worked out in a straightforward fashion. Some of the SBT programming conventions were different from what we expected, but they were at least readable and comprehensible. In particular, we noticed many repeated blocks of code that we would have split off as separate subroutines (and, in some cases, that is exactly what we did, to ease our modification process). Fortunately, this did not present any serious impediment to working with the code. *dProfessional* is written to handle the most complex situations, so that most changes will be simplifications. Commenting out existing features is much easier than adding absent features, so it seems that SBT has chosen the right direction.

We were very impressed with *dProfessional*'s completeness. It included just about every report that we could possibly desire, including client aging. It included a capacity for generating recurring billings, which was crucial to our application (although we made it an automatic process at billing time rather than a menu-triggered process), and also included capacities for tracking billings by employee and project, which could be extremely useful in other contexts, although they went far beyond our purposes of the moment.

Furthermore, SBT provides additional support to VARs, including classes and a BBS with many useful SBT-related files and public domain software. A *Programming Standards* manual is also available from the company, which offers valuable insights for making changes to the code without compromising its integrity. The commented File Listings section in the *dProfessional* manual is well done, and a big help in understanding the system. All in all, we had a very positive experience with *dProfessional*, and would not hesitate to attempt modification of other SBT products. (*dProfessional*, SBT Corporation, One Harbor Drive, Sausalito, CA 94965, 415/331-9900.) □

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Warren Sirota is a database consultant with experience in a wide range of languages. He also composes and programs computer music. He lives in Oakland and can be reached at (415) 482-3979.

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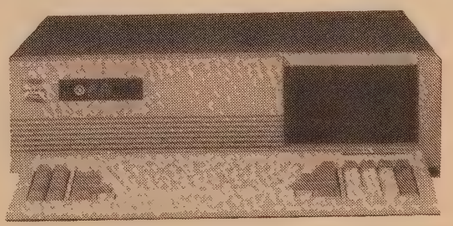

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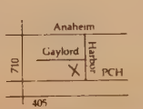

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The IIGS— Toward The Ultimate Apple II

By Mike Markowitz

Janus was the Roman god of doors, gateways and all beginnings. He was depicted with two faces: one looking backward into the past, the other forward toward the future.

It would be hard to imagine a more perfect symbol for the Apple IIGS. One face looks back across ten glorious years of Apple II computing. We don't know yet where the other face is heading, but if Apple doesn't get its act together pretty soon, there will be egg all over it.

This is a monthly column that will strive to report the growing pains of a problematical newborn. It comes of a noble lineage, and we cannot exactly say that it was an unwanted child, but it is fated, perhaps, to be overshadowed by its brother, Big Mac.

Along the way, we will wander through the world of Apple II in general, so readers with II+, IIe, IIc, or clone systems should also feel welcome on this page. Rumors, hot tips, neat tricks, praise, vituperation and free samples should be directed to the author at 27425 Abanico, Mission Viejo, CA 92691-1101.

The Apple IIGS was released with considerable fanfare in September, 1986. By May of this year, something like 45,000 had been sold. One software publisher I spoke with reported shipping "several thousand" of a leading IIGS title each month. Not exactly meteoric, is it?

Part of the problem is the dearth of software that exploits the power of the new 16-bit operating system, the 4096-color RGB high-resolution video, and the built-in sound synthesizer. Of course, the IIGS owner has access to over 90% of the vast library of 8-bit Apple II software. But if you only wanted to run all that you would have bought a new IIe.

At this writing (June) I'm aware of the following programs written specifically for the IIGS: three word processors, four paint programs (more on the way), two music programs, one assembler, a few Pascal compilers, three games (more on the way—?), a personal datebase/filer, one spreadsheet, and one business graphics program.

Slim pickings, no? In future columns, we will review most of these products, and new ones as they trickle out of the development cycle. The most obvious urgent needs are a serious, heavy-duty database program, a desktop publishing program (on hold, waiting for Apple to deliver the LaserWriter printer driver), and all that wonderful talking, animated educational software we were promised. On the hardware front, the picture is a little brighter. There are a half-dozen memory cards, a stereo sound card, a video digitizer, a fancy printer interface, and some clever cooling fans. The most urgent need here is a *cheap* hard disk, preferably internal, like on grownup computers.

The IIGS's most urgent software needs are a serious, heavy-duty database program, a desktop publishing program, and all that wonderful talking, animated educational software we are promised. The most urgent hardware need is a cheap hard disk, preferably internal, like on grownup computers.

Enough reality, I want to tell you about my dream machine.

MY DREAM MACHINE

If Macintosh users can dream of tomorrow's flat Mac, why can't Apple II users dream of a truly portable II? What good is "the power to be your best" if you can't take it with you? If we don't get the machines we want, maybe it's because we aren't aggressive enough in promoting our dream.

I want everything in one box. It should fit within the volume of the present IIc, and it can weigh whatever it needs to weigh ("He ain't heavy, he's my Apple..."). It should take as much rough handling as a Compaq portable—that's quite a lot of shock, as any Compaq owner will tell you. A light metal case (magnesium or titanium) would be preferable to plastic, and a darker color than Apple's "platinum" wouldn't show dirt and smudges as much.

I want a flip-up flat screen, with 640 by 400 pixel resolution. It can be gas plasma, electroluminescent, or back-lit liquid crystal, as long as it's legible under poor lighting conditions, and represents different colors as values of "gray." The screen should be easily replaceable, so the owner can upgrade to a color flat screen when these become available in the 1990s. Meanwhile, I'll need a built-in video connector to use the computer with an Apple analog RGB monitor.

I want a full keyboard, but I can give up the numeric keypad in exchange for a trackball. A mouse isn't really practical for laptop use—there's no place to roll it. I still want the Apple Desktop Bus connector though, just in case I need to use a graphics tablet, or similar device.

I want space for two 3.5″ disk drives, with the option of snapping one out, and snapping in a hard disk. The exact capacity of the hard disk isn't as important as the modular, interchangeable design. Of course I'll also need a smart port for an external 5.25″ floppy, to run all that classic software.

Let's see now, I won't need one of the serial ports, because the modem will be built-in. That means a simple phone jack. But I will need an SCSI port, to use the CD ROM devices we'll be seeing Real Soon Now. If I can't have the SCSE port, then I want a slot, similar to the side-mounted slot of the Laser 128. Maybe we'd better play it safe, and demand both.

I want the battery pack built-in, with at least four hours, of juice. I want a smart power supply, that functions as an AC adapter and a battery charger, without a lot of fuss. A simple battery warning indicator is fine, as long as there is some shutdown logic in the system firmware that keeps me from losing data when the batteries run low.

It goes without saying that I want all the functionality of the IIGS, (the 65816 processor, fast clock rate, the Control Panel, Toolbox, etc.) but I would gladly give up the sound synthesizer in exchange for more RAM. After all, I want a computer, not a boom-box. Minimum memory would be 512K, but a full megabyte would allow some room to grow.

Oh yes, I want a little trap door in the bottom of the case for access to at least four ROM sockets, so I can put my favorite software on silicon and reserve the drives for data.

One last item for the wish list—the printer. How about a battery-powered compact, lightweight ink-jet printer, connected to the computer by a wireless infrared data-link? No more fussing with cables. Hewlett-packard has used this idea on a recent calculator, so it's feasible technology.

The serious-minded reader might object that the dream machine described here looks to be a $10,000 dollar toy. But remember the great captalist law of Economics of Scale: anything can be cheap if you make enough of them. This has not been the path Apple has chosen in the past, but if Apple II is truly to live forever, then we will have to see a true portable sooner or later. Hey, you guys in Cupertino, let's make it insanely great.

DISK COPYING ON THE IIGS WITH A RAMDISK

The hefty price tag on Apple's 3.5″ drive means that most IIGS users will have to get along with only one of these little wonders for a while. This makes disk copying a nightmare. The disk copy

---

Mike Markowitz has been reviewing Apple II software for almost four years now. He still hasn't got a modem 'cause he's afraid of phone bills. He loves games and toys. In real life he is a computer engineer for a large aerospace company. *Copyright © 1987 by Mike Markowitz. All rights reserved.*

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routine on the system disk takes an impossible number of passes to copy an 800K volume, whether you copy by files, or by disk.

There is another way: if you have a megabyte or more on your memory card you can configure an 800K RAM disk as a "dummy" drive. Copy your source disk to the RAM disk, then copy your RAM disk to the target disk. It still takes more than a few minutes, but at least your patience (and the disk drive eject button) won't be worn out by endless disk swapping. This is not a very sophisticated technique, but it isn't documented in any of Apple's manuals, and it might be helpful to beginners to describe the procedure in detail. *Remember that this only works with software that is not copy-protected.*

To set up the RAM disk, enter the Control Panel by pressing **<Ctrl>-<Open-Apple>-<Esc>**. Press the down arrow key until "RAM DISK" is highlighted, and then press **<Return>**. The RAM Disk menu screen will appear. Using the right arrow key, set the maximum and minimum RAM disk size to 800K (it goes up in 32K increments each time you press the right arrow key, so that's 25 key-presses each). Quit the control panel, following the instructions carefully so your changes will be saved. The changes don't take effect until you turn off the computer, or Reset it. Turning it off seems more certain.

Wait at least 30 seconds, and turn the computer back on, with your system disk in the 3.5" drive. Go into the Desktop (The Program Launcher is so useless that most users will probably choose to modify the working copy of their system disk to boot directly into the Desktop.)

You will notice a new disk icon on the desktop labeled "RAM." ProDOS thinks it's another 800K drive. Double-click on it (place the mouse pointer on the symbol and press the mouse button twice in rapid succession). A window blossoms open, showing you 4K of system housekeeping file, and 796K of beautiful empty space. Now Click on the close box to put the window away.

If you have a megabyte of RAM on your memory card, you can configure an 800K RAM disk as a "dummy" drive.

Let's assume we don't have any formatted blank disks on hand (a veteran user learns from bitter experience to *always* keep a few formatted disks on hand).

Now we're going to format a blank disk. Pull down the "Special" menu from the bar at the top of the screen, and select "Format A Disk." You can also enter this from the keyboard with **<open-apple>-<F>**. The drive will spin a bit, as the disk formatter is loaded, and a dialog box will pop up to ask you for a name for the new disk.

Eject the system disk and insert the blank disk you are going to format. If there's anything on the disk, the system will give you a last chance to reconsider. While the disk is being formatted, you have time to fill out a blank label. Don't leave unlabeled disks lying around! It's an invitation to disaster.

Formatting takes about 55 seconds. Eject the disk when formatting is complete. This is now your "target" disk.

Insert the source disk (that's the disk you want to copy from—it is not copy-protected and we are making this copy for archival purposes only —FBI please take note). The disk icon will pop up on the desktop. Drag the new icon onto the RAM icon (put the mouse cursor on it, hold down the button, and without releasing the button, move the mouse until one icon is superimposed on the other. When the icon changes color, release the button). You have just commanded the system to copy everything on the disk into RAM. A dialog box will pop up, to give you a running countdown of how many files remain to be copied. When all the files have been copied, eject the source disk.

It's finally time to make the copy. Insert your formatted target disk. Its icon will appear on the desktop, labeled with whatever name you gave it when you formatted the disk. Drag the RAM disk icon onto the target disk and release the mouse button. You will see the same dialog box, giving you a running account of the progression of the copying process. When the box disappears, your copy is complete.

Using a RAM disk makes the disk copy process on a one-drive system less tedious. Apple IIGS owners can live without a second 3.5" drive, but they probably cannot live without a memory card. Since the presence of the 800K RAM disk may prevent memory-hungry IIGS software from loading properly, you should create it only when you need it, then delete it by going back to the control panel. Eventually, someone will probably write a utility program to automate this process, but until then we have to make doing it the hard way as easy as possible. □

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COMDEX Report

By Matthew Leeds

Fasten your seat belts—we're moving into the future at a rapid pace. The A2000 just may become the graphics workstation of the future. I've just returned from COMDEX in Atlanta, and the products that will be available in the next six months will amaze and delight Amiga owners.

Just to bring everyone up to date, by the time you read this the A500 will be shipping in quantity, the A2000 will be just around the corner (September or October most likely), and the price increases will be old news.

What price increases, you say? CBM has raised the list price of the A500 to $699 and the A2000 to $1995. The additional revenue will be used to cover an educational three-for-the-price-of-two discount and to finance a new advertising campaign. Although over the long term CBM will most likely discount these new machines, they have also begun to realize their true market value and the need to put some cash in the bank, as well as to increase the installed base.

On to some of the new products I saw at COMDEX. *Microfiche Filer* is a new kind of database program which lets you mix text and graphics as a single record in a file. Records are stored as a two dimensional sheet, like a microfiche. The data is displayed in a condensed form, and you drag a magnifying glass over the form to see the data contained within.

The program uses a data compression technique to squeeze pictures so that several can be displayed on the screen at once; pictures of any size can be displayed, even those larger than a full screen. This is the first database program that I've seen for the Amiga that may fulfill the promise of an elegant integration of text and graphics with the full power of a database's retrieval capabilities.

Taurus showed a line of software for the Amiga that has been used on 68000-based workstations in England. *X-CAD* can display 3,000 lines per second from a database of 30,000 lines. It can provide net lists, plotter output, Ethernet support, on-line help and documentation with both text and graphics. A version of *X-CAD* includes a program development system, effectively creating a CAD operating system. Other upcoming products from Taurus include a vector font publishing front end for *X-CAD*, a page makeup program, and a Genlock hardware device.

Intuitive Technologies, the same programming crew that brought you *MaxiPlan*, is about to unleash three new products that they will be marketing directly. *WOW!* is a disk cache program that improves the apparent speed of your floppy disk drives. It uses smart buffering to keep commonly used data in memory, and it can fetch information before your Amiga knows you want it. Encore is a keyboard and mouse macro utility. It will record your keyboard and mouse actions, store them, and play them back at your request. *ShortCut* is an abbreviation dictionary. It remembers your abbreviations and expands them at your command. Storage can be either in memory or on disk. You can create multiple dictionaries for any application.

Mimetics has moved into a new field. Sure they've kept their hand in the music hardware/software arena, but they are coming out with a line of hardware to be used in the video market. The ImaGen Genlock will work on any Amiga and can be used to provide composite color video output on the A500. It can also be used to overlay the Amiga's output on any external video source. The overlay function is software selectable. The FrameBuffer is a 24 bit video imaging board that will allow the Amiga to display over 16 million colors. A FrameCapture option will capture video frames in real time. The VCR Synchronizer/Controller lets the Amiga be used as an edit controller or frame animation tool. Finally, the SMPTE interface reads and generates SMPTE time code, letting *SoundScape* lock to any SMPTE source. Mimetics also released over two dozen new *SoundScape* modules.

Associated Computer Services is releasing an interlocking set of programs for television station graphics animation. The E/FX module is the hub of the system. It uses a storyboard layout concept to create overscan video animations. A full set of wipes, fades, pops and other transitions are available. Tweening animation, color cycling, brush animation, and remote controllable time sequencing are just some of the features designed to assist in the production of professional looking, broadcast quality animations. The *Weather Graphics* module is a full set of screens, brushes and clip art for the weather broadcaster. Also included is special download software that will tie into many of the most commonly used weather services. The Character Generator module supplies over 200 fonts in any style or color. Text can be imported from any word processor, or entered directly. Text can be crawled or scrolled from/to any position on the screen, and special effects like neon or chrome are supplied as well.

The Gemstone Group has produced a 68020/68881 add-on board for the A1000. This is a daughter board that plugs into the 68000 socket. It will sell for under $1000, and may be found below $800. The board is called Sapphire, and is available with or without the 68020 and/or the 68881 chips.

Haitex Resources will release the Memory Plus for the A2000. This is a multifunction card that provides a 68881, one or two additional parallel ports, an additional serial port, and sockets for an additional megabyte of RAM.

NewTek has announced Digi-Adaptor, a hardware product that will finally let *Digi-View* owners digitize color images directly from a home VCR. Also shown was a final release version of *Digi-Paint*, the HAM mode paint program, and *Maxine Headroom*, a demonstration version of an animation program using digitized images and sound. Look for lots of nifty new goodies coming from NewTek between now and year's end.

Byte by Byte showed *SCULPT 3-D*, Eric Graham's solids modeling and ray tracing program. Three-dimensional images are created in a wire frame environment, and then rendered in any of five IFF modes. Full control over color, texture, and shading is provided. Also announced was a memory expansion device called Advantage 500 for the A500, from 512K up to two megabytes. Software that displays a graphical representation of the RAM chips, tests each chip and flags any defective chips is included.

There were plenty of other products shown. Meridian Software showed off *Zing! Keys*, a keyboard macro program. Micro Systems Software showed a new version of *Online!*, Aegis showed *Videoscape*, and I got to meet the head honchos from Commodore. Over the next few months I'll be reviewing some of the new products for the Amiga, discussing my views on the future of the new machines, bouncing a few rumors regarding new products, and generally trying to give you your monthly diet of information and entertainment on things Amiga.

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Matthew Leeds has been using and writing about Commodore computers since 1983. He is currently Director of Marketing for Byte by Byte Corporation. He can be reached on the WELL (415/332-6106) as mklsf, or through MicroTimes.

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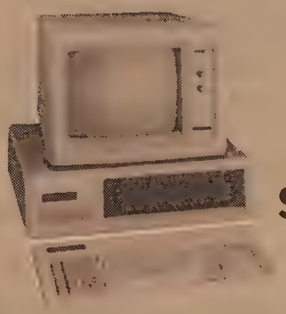

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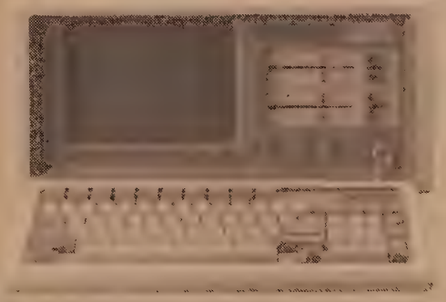

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From The World Of Atari

By Helmi Kobler

They said June's World of Atari show would flop. It was put together, from conception to opening day, in little more than eight weeks. It shared the month with COMDEX and the CES, two national industry trade shows that might have discouraged some already traveled-out exhibitors. And if that weren't enough, a few local Atari user groups that were expected to help in putting on the show were instead threatening to boycott. Things looked encouraging...

When I arrived at the Santa Clara Convention Center on Friday the 19th, though, it struck me that things weren't so bad. The troublesome user groups had agreed to cooperate. A few popular ST developers were absent but many still managed to make it. And they had some exciting products to show the 6,000 people who'd be attending through Saturday. I don't have enough space to list them all, but I'll cover the highlights.

It's pretty safe to say that Atari's Mega ST, laser printer and IBM PC clone were the hit of the show. Just about every attendee had heard something or other about these products since their announcement in January, but for many this was the first opportunity to see them live. Two Mega ST 4s (with four megabytes of RAM) were constantly surrounded by clumps of people. These were production models with the fabled blitter chip and revised TOS operating system ROMs installed. Everything about them seems refined—their modular design is sleek, the detachable keyboard rests comfortably in your lap and the keys have a solid, IBMish feel to them. The blitter speeds up common GEM operations such as window drawing and such, though I couldn't coax much software to run noticeably quicker with it. Changes in TOS are many; they include the ability to turn the blitter chip on and off from the Options menu of the desktop, a new folder limit of xxx and a continuous window scroll when scroll arrows are held down—no repetitive clicks. Quicker memory clearing at boot up, and faster single drive disk copying and formatting routines have been added also.

Atari says the Megas will be released somewhere in July—of this year, that is—and will run from $1500 to $1700 for two and four megabyte versions, respectively. Blitter and TOS upgrades for 520/1040 owners will probably be ready by September for $120. These involve a swap of the ST's motherboard, meaning you'll lose any piggy-backed RAM upgrades you have installed.

Atari's SLM804 Laser Printer got a good deal of attention too. It's an eight page-per-minute, 300 dot-per-inch printer that uses its host ST's processor and memory to create pages. As a result, the printer's retail price is being kept under $1500; however, it demands at least two megabytes of RAM from the ST to print full page graphics and multiple fonts. 520 and 1040 users can use it under a Diablo 630 printer driver for handsome, single font text documents, though.

Helmi Kobler took his first step into the computer world in 1983 when he walked out of Macy's with an Atari 800 in his arms. Still an Atari user, he's now inseparably attached to his ST. He can be reached through MicroTimes or e-mail <helmi> on The WELL at (415) 332-6106.

Atari's TV commercials will start airing in the fourth quarter of '87, and generally compare the 1040's memory/price ratio to the IBM PC-AT and Apple's Macintosh.

Atari also had near-finished versions of four of its television commercials playing on a VCR. The ads will start airing in the fourth quarter of '87 and generally compare the 1040's memory/price ratio to the IBM PC-AT and Apple's Macintosh. They look sharp and make you wonder "is that an Atari commercial I'm watching?" Definitely a far cry from earlier Saturday morning commercials reading "fun is back, oh yes sirree, it's the 2600 from uh-tar-ee..." If Atari's listening, however, I'd like to suggest that their ads focus a bit more on ST software performance rather than hardware. Many folks don't care whether the ST offers more K for the dollar until they know the machine can also run a good spreadsheet or desktop publishing package. Atari's commercials don't make that clear enough.

Getting on with third party attractions, I found a small Texas company called Seymor-Radix selling IMG Scan, a $99 scanner that works with just about any dot matrix printer around. IMG Scan consists of a small uncased circuit board that plugs into the ST's cartridge port and a small optical "image cable" that replaces your printer's ribbon and mounts atop its print head. Scanning is done by the cable as it runs back and forth over a paper image set up in the printer. The resolution an image is scanned in depends on the printer being used. According to Seymor-Radix, most Epson compatibles usually scan at a vertical resolution of 144 or 216 dpi, and complete a letter-sized page in under ten minutes.

Included software lets you adjust gray scale and magnification levels, and save scanned images as a *Degas* or *NEOchrome* picture. I'll let you know more on how IMG Scan performs once I get mine to work correctly! There's a lot of trial and error involved before you get a decent scan, but the final result is impressive. Seymor-Radix is at P.O. Box 166055, Irving, TX 75016.

Navarone Industries has a scanner of its own called the ST SCAN Image Scanner. The ST SCAN package sells for $1,239.95 and includes a Canon IX-12 Sheet-Feed scanner, cartridge interface, cable and software. The Canon IX-12 scans at 300, 200, 150 or 75 dpi and Navarone's software can save digitized images as *Degas* pics, and standard .IMG GEM or PostScript files. You can reach Navarone at 1-800-654-2821.

From Brøderbund Software were *Film Director* and *Art Director*, two fantastic programs that will sell as a single package for $79.95 in September. *Art Director* is an advanced paint program with features such as rescale, stretch, distort, bend, bulge spin, view perspective, scroll, scrape and so on. Features like these make *Art Director* the most powerful painting program out for the ST, but it's got one major weakness. The problem is that it works only in low resolution and, although it will import *Degas* or *NEO* pics, it will not save images in those formats. By supporting only low resolution and not providing a standard file format to save pictures under, *Art Director* limits itself to being a great paint program that's only good for creating art to add to a slideshow. Forget importing its stuff into *Easy-Draw*, *Publishing Partner* or any other program that otherwise accepts art from outside (except *Film Director*).

Film Director is a snazzy cell animation program that lets you design "films" featuring objects created in *Degas*, *NEO* or *Art Director*. Animations are created frame by frame, and music and sound effects may be added in. A free "film player" is included so people without *Film Director* can still run your animations.

Brøderbund is also bringing out ST versions of *The Print Shop* and its *Karateka* game, slated for September release. Reach Brøderbund at (415) 492-3200.

Antic Publishing got itself a booth directly across the aisle from Atari and was demonstrating its Stereotek 3D glasses from The Catalog. Just about everyone on the show floor must have tried out the glasses, but many probably missed the short demos given of two upcoming software packages. The first is called *Spectrum 512*, a low resolution painting program that can display up to a whopping 512 colors at a time. *Spectrum*'s packed with advanced color editing and anti-aliasing (for smoothing out jagged lines in pictures), features you won't find in any other ST art package. And since it accepts *Degas* and *NEO* pics, *Spectrum* could be used as a touch-up tool for smoothing out jaggies and adding hundreds of colors to existing pictures.

Also coming from Antic is *Cyber Paint*, a paint package specifically intended for enhancing pictures created with *CAD 3D*. Images that would be tough to make in CAD, such as clouds or explosions, can easily be painted in frame by frame using *Cyber Paint* and then resaved still as CAD files. Both *Spectrum 512* and *Cyber Paint* will retail for $60 and are scheduled for release in the first half of October. Contact The Catalog at (415)957-0886 for more information.

I found Data Pacific, maker of the Magic Sac, at the show with a "working" prototype of Interceptor 1, the disk drive interface that will supposedly endow your ST's floppy with the ability to run Macintosh disks right out of the box. Unfortunately, though it was a "working" prototype, Data Pacific decided not to actually demonstrate the Interceptor. Something about it not quite writing to the Mac disks correctly. They say, however, that the interface should be ready in four to six weeks for less than $200. It seems they were telling me that at March's West Coast Computer Fair. Hmmm.

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ASHTON-TATE
continued from page 56

million level. Ashton-Tate reached over $200 million in six years. It is very hard to put the systems in place and have them there long enough for people to understand them. You suddenly reach a new level and you need a new system. It's also hard to throw away fast enough bureaucracy that is not needed at the next stage—because it hasn't even been absorbed yet. It's still propagating and you might want to pull it back.

With the death of George Tate, and your arrival, and the departure of some executives, do you feel you were cast in the role of a villain?
No. I think that to me personally, the press has been very fair. Our user base has been fair and the financial community has been fair. I think there was a lot of confusion about what was going on here primarily because we choose a certain level of communication on certain issues.

Let me talk about the executive departures. Ashton-Tate believes in a high caliber of professionalism. Around the departure of people, we subscribe to the common euphemism of "resignation" when there is a disagreement. I will go on the record as saying there hasn't been a vice president that has left this company since I've been here that hasn't been asked by me, personally, to leave. There's a lot of confusion about—if people are jumping ship, is there a major disagreement with Ed? There is a disagreement with Ed when something like that happens, and it's over performance. People are asked to leave when their performance is inadequate for the job, and there are often times with the individual involved about what his performance is or could be.

Did you feel like you were the new kid on the block and people were testing you?
Oh, I don't think it was necessarily testing. Again, we're in an industry that goes very fast; people have the opportunity to have jobs and titles at a much quicker rate than they might in any other industry. It's hard enough to live up to the jobs growing in a large company at the pace that most large companies grow—let alone [a computer industry company]. Look at fiscal '87 over fiscal '86. We were almost double the size. Even if you didn't have a title change, more than likely you had twice as many people and your job doubled. It's very difficult to keep up, and it's been difficult for all of us to be mature enough and objective enough about ourselves in our ability to do the job. Unfortunately society has taught you, me and everybody that climbing means success, not finding the level where you can make the most bang for the buck. If everybody wanted to be president of the United States we'd have trouble. [laughs]

In the L.A. Times story you commented on your dislike of the "cult of the personality" in the computer industry. Could you elaborate on that and your general feelings about this industry?
I wouldn't be in any other business. I like this business. The rules always seem to change and yet some things never change.

I generally like the people in the business. Most people conduct themselves professionally. What concerns me about it is that from an industry analyst perspective (i.e. financial community perspective and press perspective), people are more in the fishbowl in this industry, and more concerned with personifying a company into one man. Not quite like Hollywood—the entertainment industry is probably the most people intensive industry.

"I will go on the record as saying there hasn't been a vice president that has left this company since I've been here that hasn't been asked by me, personally, to leave. There's a lot of confusion about—if people are jumping ship, is there a major disagreement with Ed? There IS a disagreement with Ed when something like that happens, and it's over performance."

A lot of the perception of what this company is is the perception of what I say and what I do. This company is far more than me. I'm here to look at the overall strategic direction of the company, communicate what we're doing to the financial community and the press, our customers, etc., but every day there are nearly 1200 other people here making it happen, making what I say in words into reality.

But in this industry, you think of Microsoft, you think of Bill Gates. You think of Lotus, you used to think of Mitch [Kapor], now you think of Jim [Manzi]. You think of Ashton-Tate, you think of me. I don't think all these [unknown employees] get as much credit as they deserve for making it happen.

Would you prefer not to be so well-known and just keep your head down and do your job?
In general. When I first came to the company in one of my first talks with our PR agency I said "I do not want to become a media personality, unless you tell me it is absolutely required to be successful in this business." And it turns out it is required that there be a spokesman for the company out there. It's important to communicate where you're going and keep your name out in front of your customers.

What's the worst part about your job?
[laughs] There's no place to hide. I'm not a person who tends to want to hide, but the reality is there's no place to hide from me. I tend to be my worst critic, my hardest judge, and when something doesn't go right, it's my problem. It's not someone else's problem.

Really, the worst part of that is that I have to take the unpleasant actions if someone else doesn't in the chain. If nobody else makes the tough calls, you have to make them. But that's part of the juice of the job too, getting to make those calls and make the decisions. It's not always easy when you have to let somebody go when they're not doing well. Some of the hardest decisions I had to make related to the people in the executive ranks who have left this company at our behest.

Are there any decisions you made in that respect that you wish now you could change?
If one examines the past one can always come up with a few decisions [that were wrong]. Some people say "I've made every decision right. I'd never change." I don't believe them. [laughs] I think there are decisions that could have been made better, and emphasis that could have been placed in other areas. I think I, like most people in jobs like mine, have called the majority of them right. And that's all you can ask. My toughest judge is myself, and if I expected perfection, I'd probably end up in a loony bin.

Do you remember your first experience on a computer?
Yes. I saw the magic of *VisiCalc*, is what it amounted to. That was in 1979, when I actually put my own fingers on a keyboard on a personal computer. It was an Apple II with a pre-release version of *VisiCalc*. It was then I knew that's where I wanted to be.

I had picked the industry prior to that. When I picked a job out of Harvard Business School I picked Texas Instruments. You want to talk about a call I made wrong! [laughs] I picked TI because I thought they'd be the long run leader in personal computers. Fortunately the job I took was totally unrelated to the 99-4 personal computer. It was related to a different machine that did not see the light of day. [laughs]

Is there anything else you want to say?
The only thing I can say is, Ashton-Tate is going to do the job in delivering the right products to the customers in a timely fashion. The ultimate test of that is to show you those products. I can keep saying "I'm going to do it." But I need to deliver. And if I don't, I and the company deserve to fail. Then if we fail, we don't care who wins. We don't care if it's IBM, if it's Oracle, if it's Lotus, or if it's Migent. We don't want to fail and we don't intend to. □

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USER GROUP NETWORK

Apple II users take note: **Applefest** is coming to the San Francisco Civic Auditorium September 18-20. This all-II event offers exhibits and conferences on a variety of subjects of interest to the II community, and provides you with the chance to check out the latest products from Apple and many third-party companies. Be sure to stop by our booth and say hello—and if you'd like more information about the event itself, call Cambridge Marketing Inc. at (617)860-7100.

For those of you who read last month's column and are concerned with the **FCC**'s plan to raise the costs of packet-switched networks (a move nearly certain to drastically increase the cost of using online services): the FCC has now released the docket and is inviting responses. Copies of the FCC docket, detailing planned rate increases and the policy behind them, may be obtained by calling the FCC at (202) 632-7000—refer to Amendments of Part 69 of the Commission's Rules relating to Enhanced Service Providers CC Docket 87-215.

Brock Meeks and **Dave Hughes** have uploaded the entire text of the document to **The WELL's Telecommunications Conference;** it's a fairly long piece, so you might want to download it for offline reading. Discussion of the FCC's plans continues in lively fashion as well, with Dave's plans for a **Modem March On Washington** moving right along, and sometimes-heated differences of opinion between users, politicians, and phone company reps. For an up-to-date account of the state of things (transcending the time limitations of print), check it out: The WELL can be reached at (415) 332-6106; you reach the Telecommunications conference by typing **g tele** at the Ok prompt. The complete text of the FCC docket is in Topic 69, with discussion continuing in Topic 66 and elsewhere.

The FCC must receive your response by September 14, since the rate hikes are scheduled for January 1, so time is of the essence.

Also on **The WELL, Steve Brown** would like you to know about his **FairFacts** conference, dedicating to disseminating accurate economic info. It currently provides *SuperCalc* templates of the Economic Report of the President, as well as discussion and analysis of economic issues. For more info, you can write Steve at PO Box 536, San Rafael, CA 94915, or call him at (415) 485-1781.

Speaking of Marin-based telecomm, our friend **Jeff Hellman,** proprietor of Hellman's (a Macintosh store, not Best Foods Mayo cleverly disguised), invites interested Mac users to check out **MacHeaven,** a free 24-hour BBS he's running at (415) 258-9348 (300/1200). Aside from offering uploads and downloads of public domain and shareware programs (games, utilities, music, etc.) and public and private message areas, MacHeaven offers a special section for developers and users of *4th Dimension,* the Mac database from Acius. There's also a Mac news and reviews section, plus a downloadable Hellman's price list offering special pricing for electronic mail order. If you'd like more info, you can reach Jeff himself at (415) 453-7924.

From the offices of **Assemblywoman Gwen Moore,** who chairs the Utilities and Commerce Committee in Sacramento, comes news of **The Capitol Connection.** This is a BBS established with the support of **Assembly Speaker Willie Brown** and the Assembly Rules Committee "to test how computer communications can involve citizens in the process of governance," according to the press release.

The Capitol Connection offers over 15 conferences on legislative subjects; its users can also send mail, download press announcements, or enter their own comments and opinions as part of the ongoing discussions. The relatively new board is being accessed by modemers all over the state and offers a convenient way to voice your opinions to the state's decision-makers. The board runs 24 hours a day at (916) 442-0746 at either 300 or 1200 baud; settings of 7-1-even are recommended. For more information call Bob Jacobson at (916) 445-4246.

In other BBS news: **Kenneth McPherson** writes in to tell us about **GLEAN (Gay and Lesbian Electronic Access Network),** which is in the process of providing information and discussion about the National March on Washington for Lesbian and Gay Rights, scheduled for October 9-13. This, says Kenneth, is a board for serious political discussion, not to be confused with some of the XXX-rated stuff you may have encountered elsewhere—he includes a long list of endorsements from outside individuals and politicians "to attempt to separate our BBS from the sexually oriented BBSs that some members of our community have placed online. There will be nothing of an erotic nature on this board at any time." Interested parties are invited to call (415) 441-7671, 24 hours, 8-N-1, 300/1200. GLEAN's voice line is (415) 441-7613.

Woody McPheeters, a faithful correspondent, informs us that the **BAKUP (Bay Area Kaypro Users and Programmers) RBBS** has moved. Woody himself is now the sysop, and the board's new number is (415) 849-9380. BAKUP membership is not required to access the board, which runs 24 hours a day.

For you Southern California online shoppers, the **Universal Marketing BBS** offers hundreds of movie and video titles, as well as a resume transmittal service. There's no charge for first-time users, and the board runs from 6 pm to 7 am (West Coast time) at (213)413-1146. The sysop is **Russ McCor,** who awaits your calls.

And finally, the intrepid **Shane White,** who last adorned these pages as the sysop of **The Dead Knight's Tavern BBS,** regretfully informs us that the Tavern is no more. All is not lost, though—Shane has promoted himself to WizOp of **Math Mountain BBS** for "the few—the bold—the foolhardy!" MMBBS offers a fantasy game for true diehards, with 500 levels and a host of forces to thwart you at every turn. You can seek your fortune 24 hours a day at (415) 364-6877, 300/1200.

In user group updates: **Robert Brown** of Campbell writes in with a gentle reminder that the **Gavilan Users Group** continues to offer support, service and new products to the owners of this orphaned machine, a powerful laptop computer that's taken a new lease on life. If you're a current or prospective Gavilan owner, you'll find this group a real lifesaver—write them at Gavilan Users Group, 780 Manx Ave., Campbell, CA 95008.

Maurice Aranda tells us that the **Bay Area AT&T PC6300 Users Group** continues to grow and prosper, offering its members demos, technical help and general assistance. Meeting times and places vary since the membership is scattered throughout the area; for current info call Maurice at (415)972-5436 or **Joe Mahoney** at (415) 586-8376. Alternatively, you can write to the group at 215 Market St. Room 459, San Francisco, CA 94106.

Genealogy enthusiasts might want to investigate **Computer Rooters** of Sacramento (PO Box 161693, Sacramento 95816). The group offers its own BBS (**Dynasty** at 916/685-8690), guest speakers, discussions and problem solving, a quarterly newsletter, and mutual assistance with the hardware and software you'll need on your roots search.

Ed Pagter of the **Silicon Valley Computer Society** writes in about the Society's **New User's Group,** which meets on the second Wednesday of the month at Hewlett-Packard, Bldg. 50, 5301 Stevens Creek Blvd. in Santa Clara. (The entrance, says Ed, is just west of the intersection with the Lawrence Expressway). The group is dedicated to providing general discussion of DOS and its intricacies, as well as to provide software and the requisite guidance in its use. Meetings are free, but those who attend are urged to join SVCS. For more information, write Ed at 967 Perreira Drive, Santa Clara CA 95051, or call him at (408)247-9638.

Finally, Commodore users (or groups) might want to avail themselves of the benefits offered by the **Folklife Terminal Club.** This Bronx-based organization offers an extensive catalog of public domain software in a wide variety of categories for PET, CBM, VIC, C64, Plus 4 and C128 computers. While the software itself is free, there's a copying/mailing fee of $15 per diskette; each machine type has a different catalog disk, so FTS recommends that you specify which machine and disk drive you have when ordering. You can reach these folks at Box 555-DN, Co-op City Station, Bronx, NY 10475.

On that cheerful note, I'm gone for another month. If any of you are in town for Applefest, stop by our booth and say hello. Meanwhile, direct paper correspondence to User Group Network, 5951 Canning St., Oakland, CA 94609, and electronic mail to **microx** on The WELL, (415) 332-6106. Also, stay tuned for info on how to send us mail from other systems.

BULLETIN BOARDS

065

Remote Bulletin Board. (065) 242-7669 (Singapore). 24 hours, N-8-1, 300/1200/2400, UL/DL 67 meg. Sysop: Umar A. Rahman.

206

The Board Of Review. (206) 361-8018. 300/1200 baud, 8-N-1, 24-hours, Commodore. Sysop: Ron Strauss. .

28 Barbary Lane. (206) 323-2828. 300/1200 baud, 8 bits, 1 Stop Bit, Full Duplex, No Parity, 24-hours. Sysop: Mrs. Madrigal.

209

Region 7 TEC Center BBS. (209) 571-5085. Specializing in music and schools. 24 hrs, 300 baud. Sysop: Dan Guerra.

Inn Finity BBS. (209) 521-6240. Inn Finity is an Atari based BBS. Operates on a 130XE with 320K. Signalman 300/1200/2400 baud, 24 hours a day. ATASCII—ASCII. Sysops Buzz and Jann Kelley.

Bullseye BBS. Stockton, CA. (209) 474-FIDO. IBM and compatibles. 300/1200/2400 baud. Open 24 hours, 8-N-1, FidoNet 161/31 Valley PCUG. Sysop: Bob Loeber. Validation required. Lots of MS-DOS shareware.

The Spotlight BBS. (209) 368-5591. 300 baud, 24 hours, 8-N-1, dual drive Commodore 64 operated. Sysop: The Spot.

Bertha Board. (209) 239-9853. 8-N-1, 300/1200/2400 baud. 24 hours. MS-DOS oriented, with emphasis on programming source code. Free. Sysop: Ken Roach.

Motherload-64 BBS. (209) 754-5530. 8-bit, 1 stop, Punter and X-Modem, D-load, 9:30pm to 6:30am only! 300 baud. Motherload-64 is run by a programmer who is also a Plus/4 owner. Sysop: Larry Anderson.

213

Lynzie's Motherboard (818) 508-6482/(213) 650-0519. 24 hours, 300/1200/2400 baud, 8-N-1. Private E-mail, download library, dating matchup, interactive chat between users, 4 phone lines on rotary. Public boards include employment, food and restaurant reviews, sci-fi, political, debate, for sale and many more. Monthly social happenings for local users. Sysop: Lynzie Flynn.

Bulletin Board System. BBS devoted to handicappers and racing fans in So. Cal. On line every weekend. Log-on: race data for Santa Anita, Hollywood Park and Del Mar. (213) 934-6026.

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HUG1. The official BBS of the Hollywood Commodore User Group (HUG). All HUG members and visitors are welcome to drop by. (213) 874-8256.

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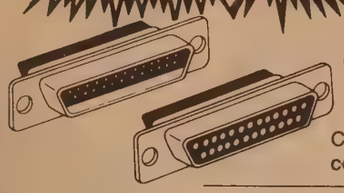

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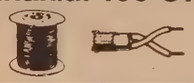

1,000 ft. - $199/M
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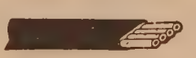
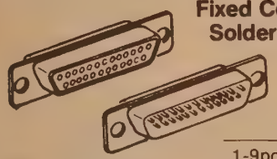


	1M	5M	10M
4-Conductor	$32.50/M	$30.00/M	$28.00/M
6-Conductor	$42.50/M	$40.00/M	$37.50/M
8-Conductor	$53.50/M	$47.00/M	$42.50/M



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DB-9S Socket	.72	.54	.42	.39	.35
DB-15P Plug	.85	.65	.51	.47	.43
DB-15S Socket	.97	.77	.60	.55	.50
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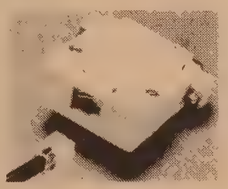

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1-9..... $3.95
10-49..... $3.65

8 Contact to DB-25 Connector
50-99..... $3.35
100 up..... $2.95

ALSO 9 PIN & 15 PIN D-CONNECTOR AT SAME PRICE

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100-999	.78 ea.

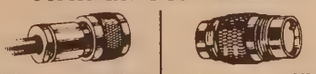
99¢ each

BNC "T"

10-49	2.30 ea.
50-99	2.12 ea.
100-999	1.95 ea.

2.69 each

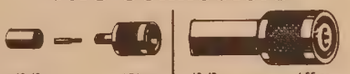
Twin-ax Connectors



10-49	2.90 ea.	10-49	3.69 ea.
50-99	2.65 ea.	50-99	3.35 ea.
100-999	2.45 ea.	100-999	3.09 ea.

3.29 each | 3.99 each

TNC Connectors



10-49	1.74 ea.	10-49	1.55 ea.
50-99	1.58 ea.	50-99	1.42 ea.
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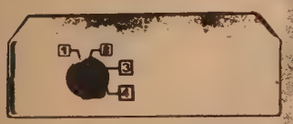

	1-9	10-Up
• 25 Pin DB-AB (1-2)	$29.95	$22.95
• 25 Pin DB-ABCD (1-4)	$39.95	$32.95
• 36 Pin Centronics-AB (1-2)	$39.95	$29.95
• BNC	$29.95	$22.95
• TWINAX	$25.95	$22.95

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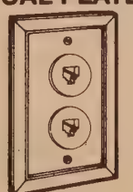
25-99 $1.80 ea.
100 + $1.20 ea.

6 Cond.
1-24 $3.69 ea.
25-99 $2.69 ea.
100 + $1.80 ea.

8 Cond.
1-24 $4.95 ea.
25-99 $3.75 ea.
100 + $2.50 ea.

DUAL PLATE



4 Cond.
1-24 $3.69 ea.
25-99 $2.49 ea.
100 + $1.60 ea.

6 Cond.
1-24 $4.29 ea.
25-99 $3.29 ea.
100 + $2.19 ea.

8 Cond.
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25-99 $1.49 ea.
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408

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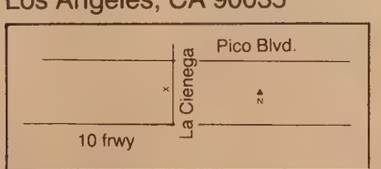

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MBL Referral System BBS A board dedicated to personal messages and advertising listings. Modem: (415) 444-6362; 6 pm - 6 am weekdays, 24 hours weekends. MBLRS BBS users meeting Saturdays, 5:30 pm, 1555 Lakeside Drive, Suite 23, Oakland. Call (415) 444-3033 for info, ask for Mel.

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ROOTS BBS. Available 24 hours, 7 days a week, supports 300/1200 baud at 8/N/1. Specializes in genealogical info with messages, upload and download of CP/M, DOS, Apple software. Sysop: Brian Mavrogeorge. (415) 584-0697.

Welch Net II. A public FIDO BBS. Message areas devoted to Turbo Pascal programming and Seequa Chameleon computers. Available 23 hours/day. (415) 664-2811.

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Open Campus BBS (415) 895-0135. Operated by San Leandro High School and Apple Eaters Users Group, 5 meg, 20 message bases plus library. 24 hours, 300/1200. Sysop: Bob Shayler.

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Marin Community BBS (415) 459-3326. 300/1200 baud, 6 pm - 10 am M-S, all day Sunday. 520 ST/Atari information. Sysop Dave Powers.

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Actrix Enthusiasts RBBS / RCP/M (415) 968-1783. 300/1200 baud, 24 hours, Free. Registration required. 46 megabyte CP/M system. In Mountain View. Sysop: Andy Bajka.

BBS-JC Just Computing. (415) 961-7250, 7E1/8N1. 24 hours/7 days, 300/1200/2400. Amiga and CBM public domain software. If it's new, see it here first! 8 sections including Commodore announcements are currently in operation. This board is especially for "Silicon Valley" Commodore users. Sysops: Thad Floryan and John Cronin.

Bug's Net HP. This bulletin board has over 20MB of PD software available. Message areas include HP300, IBM PC Technical and consultants forum. Fido node #10/777 (pending). 300/1200/2400 baud. 24 hours. (415) 236-1823. Sysop: John Buginas.

Professional Software Programmers Association. 830 Bay Avenue, Suite G, Dept. F, Capitola, CA 95010. A 24 hour service and support bulletin board for computer professionals. (408) 462-2829. 8 bit, no parity, 300/1200/2400 baud. No fees. Product reviews, professional job registry and consulting registry services. Ask for copy of the Association's free monthly newsletter and membership information packet.

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Programmer's Circle. (415) 239-1722. 8-N-1, 300/1200, weekdays 3 pm-11pm. The Programmer's Circle specializes in carrying source code and tools to aid the programmer. Special attention is given to the Macintosh and Apple II computers, but all computer users are welcomed. Data files are online for the Mac and Apple II computers. Sysop: Roger Gibby.

The Live Wire. (415) 540-0529. 300/1200, 24 hours. A digital magazine for the graphic-arts community (printers, typesetters, self-publishers, artists). Free. Sysop: Rick Hepting.

SIGSIG BBS/RCP (formerly MEBBS) is back online! Member of the FOG and PRACSA networks. Supporting CP/M and MS-DOS public domain software and a public-access message system. No fees, novices welcome. Online registration for FOG, PICONET and PRACSA members. 24 hours, 300/1200/2400 baud. Sysop: Jim Switz. Located in Mountain View. (415) 968-7369. Call today!

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Centerville RBBS. (415) 793-3037. 300/1200/2400 baud, E-7-1 or N-8-1, 24 hours daily. Sysop: Joe Halbleib.

The Board. (415) 652-8277. 1200/2400 baud, 8-N-1, 24 hours. Public and private conferences, technical support. For AT&T and compatibles; AT&T PC support conferences. Associated with Bay Area AT&T PC6300 Users' Group. Sysop: Troy Blackburn.

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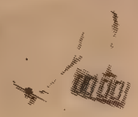

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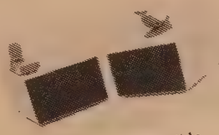

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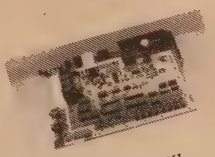

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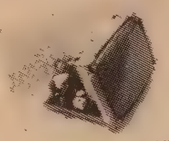

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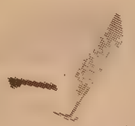

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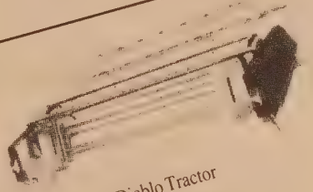

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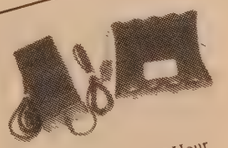

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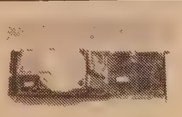

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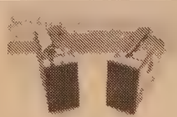

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SFPCjr UG BBS. (415) 997-4874. Sponsored by the SF PCjr User Group. 1200 baud, 8-N-1, 24 hours. Sysop: Larry Buoncristiani.

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Amiga Addicts Anonymous BBS. (415) 283-5469 "BUD-LINX." 24-hours, Xmodem, 300/1200 baud, N/8/1. Sysop: Randy Spencer.

Aardwolf Express Family Forum. (415) 651-4147. 24 hours a day, 7 days a week. 300/1200/2400 baud. Located in Fremont CA. System offers: *Infomat*, an electronic computer magazine; Showcase, shareware and demonstration programs download; complete King James Version of Bible online; Discovery (Christianity); Friends (user profiles and interests) and user opinion polls. Sysop: Veit Anton Johnson.

The Guardian. (415) 644-6806. The Berkeley Police Department's public relations and community service bulletin board. Lists crime prevention information including neighborhood and business watches, crime statistics and recent press releases. Community organizations are encouraged to call and post events. Everyone invited, you need not be a Berkeley citizen. 24-hours, 7 days a week, 300/1200 baud. Sysop: Officer Carl Orsi.

Commodore Connection BBS. (415) 458-1005. 1 stop bit, no parity, 7 or 8 bit word, 300/1200 baud, 24-hours. Sysop: Clint Beers.

AsKKey XPress BBS. (415) 657-1728. AE Line, 300/1200 baud, 8-N-1, 24 hours, 20 meg system, private E-Mail, several sub-boards, online games. Apple II downloads. No Fee.

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The Midnight BBS. (415) 752-6172. 300/1200/2400, 8-N-1, 24 hours, 7 days. San Francisco's film center! We have over ten message bases with discussions on the world of cinema. Topics include movies in general, Star Wars / Star Trek, Reviews, Fan Mail and more! Also the new home of Track 3 BBS. We need new users, so call today!!! Free. Sysop: Melt Cober. Co-Sysop: Robert Parks.

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The CP/M Connection. (415) 866-4734. 300/1200 baud, 24 hours. This bulletin board is dedicated to the many computer users with Digital Research operating systems, such as CP/M-80, CP/M-86, Concurrent CP/M, Concurrent DOS and Echelon's ZCPR3. We hope all you CompuPro, Kaypro and Morrow users find "The CP/M Connection" a useful service in the professional community. Sysop: Mike Lipschutz.

BAHUG Bay area Heath/Zenith Users Group. (415) 365-7836. 8-N-1, Full duplex operation, 300/1200 baud, 24 hours. Supports programs in CP/M, ZDOS, MS-DOS and PC-DOS. Sysop: Ed Hayes.

FairFacts. (415) 332-6106. 24 hours. WELL access charges. Provides SuperCalc templates of the "Economic Report of the President," discussion and analysis of economic issues.

The Answer Line. (415) 328-FIDO (3436). 300/1200/2400 baud. 24 hours. FIDO 11w BBS, #10/400. Local and FidoNet message areas. IBM, Amiga, Apple IIGS and Macintosh file downloads/help areas, on-line gaming. Call (415) 328-2402 for assistance. Sysop: Gary Klein.

GLEAN's BBS. (415) 441-7613. 300/1200 baud, 8-N-1, 24 hours, 7 days. Information about the National March on Washington for Lesbian and Gay Rights. Transportation, housing, calendar of events, contact numbers, etc.

619

Ramona BBS. (619) 789-6235. 24 hours, 300/1200 baud, C128, C64, Amiga, Atari, IBM, CP/M. P.O. Box 373, Ramona, CA 92065. Sysop: Digiteer.

Sysware BBS. 24 hours, 300/1200 baud, (619) 278-8661. Commodore machines only. Sysop: Don Malette.

The Nassau XPress. (619) 433-XPRS. 8-N-1, 300 baud, 24 hours. An information and entertainment BBS with 11 message bases including electronics, amateur radio, computer news, music, adventure games, BBS review. Full access is granted to long distance callers with same day validation for new users. UL/DL available using XModem or Punter. Private e-mail, text files, online games and utilities. Sysop: Dan Wright.

Willy-Net. (619) 535-0816. 300/1200, 8/N/1, Large download and message area. IBM. Sysop: Willy Bergner.

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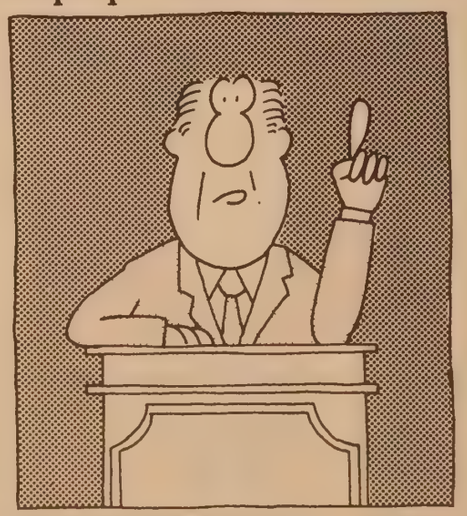

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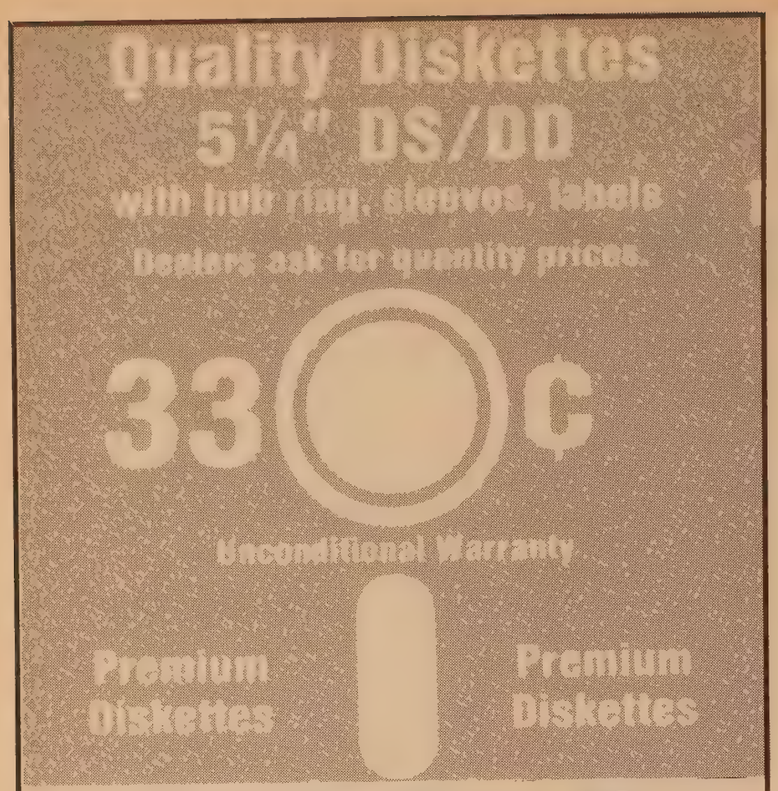

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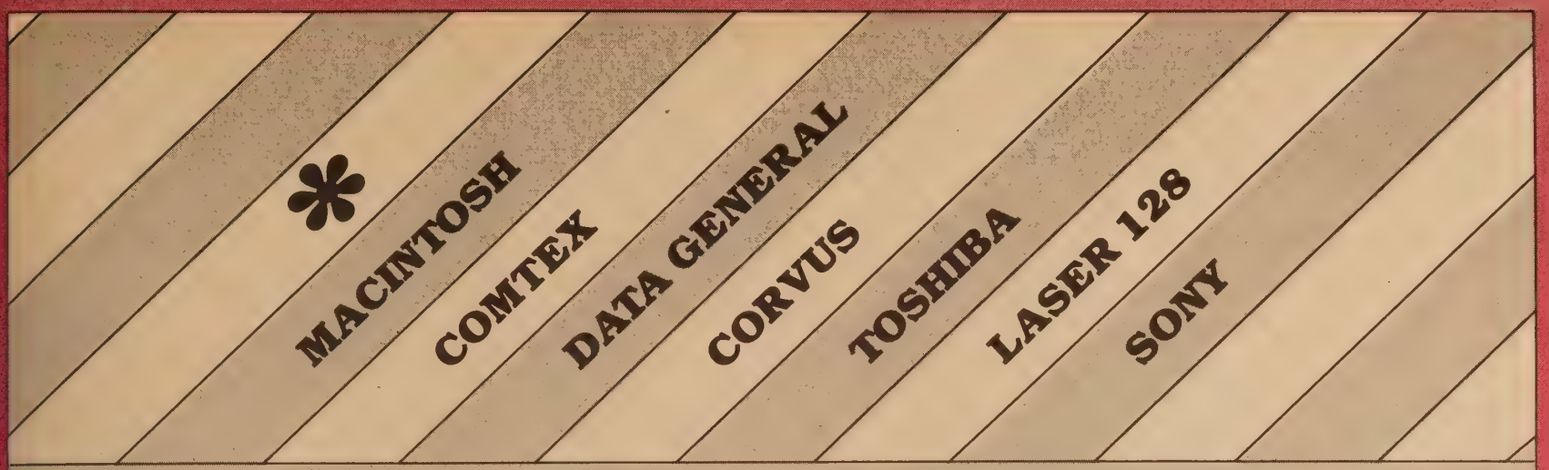

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LAACE (Los Angeles Atari Computer Enthusiasts). (818) 348-8644. 24 hour, 300/1200 baud, 10 meg online.

The Californian. (818) 368-7497. 300 baud, 24 hours. Color Bulletin Board System runs 24 hours a day, 7 days a week. Dedicated to the TRS-80 Color Computer, but other computers welcome. 9 sub-boards, more soon. No fees; only rule—no attempts to crash the system. Sysop: Jay B. Sanders.

Wizard of Osz RBBS. (818) 709-6978. 300/1200/2400, 24 hrs., CP/M or MS-DOS. Sysop: Mat Satuloff.

Atari Resource Magazine (ARM) (818) 446-5813. 24 hrs., 300 / 1200. Currently serving Atari and IBM computer users. Eleven message bases: general chatter, hangouts, advertise, for sale, XE Atari, ST Atari, modem, ul/dl, other BBS #s, Bible, job board. Sysops: Bob and Kim Reynolds.

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The MacLodge BBS. (818) 444-9850. 8-N-1, 40 megs, 300/1200/2400. Hours M-F 3:30 pm-7 am; 24 hours on weekends and holidays. Macintosh up/downloads, plus Mac info. Mac users only please. Sysop: Dennis Cosio.

Greycastle BBS. (818) 355-7872. 300/1200 baud, 24 hours, 7 days. Apple Macintosh discussions and news, plus employment opportunities at Pasadena City College. User's Guide available. Sysop: Stan Coutant.

The Outpost RCP/M. (818) 353-8891, 300/1200 baud, 24 hours. Online games, occult and general text files, CP/M, Turbo Pascal. Sysop: Phil Hansford.

AT&T PC6300 Users' Group BBS. (818) 954-0530. 300/1200 baud, 8-N-1, 24 hours. Only So-Cal BBS "officially supported" by AT&T. Sysop: Eric L. Levinson.

Infotronics Computers BBS. (818) 282-7094, 300/1200 baud, 10 am-7 pm Mon-Sat, Sunday 12-5. 20 meg online. Message bases and file transfers for Macintosh (or Atari ST with Mac emulator), IBM (or Atari ST with IBM emulator) and even the Atari ST computers! (All computers are welcome.) We need users! No fee and plenty of elbow room—give us a call. Running on MichTron BBS software for Atari ST.

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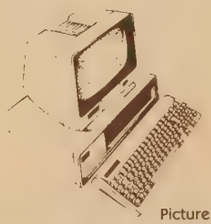

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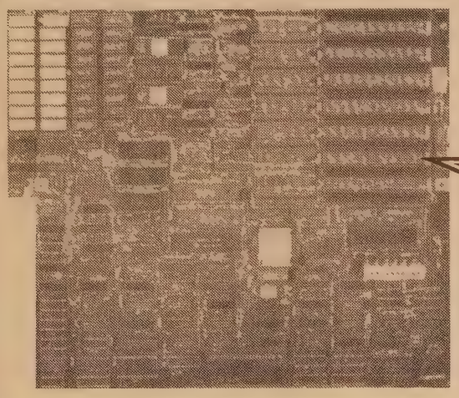

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SAC TIBBS. (916) 927-3012. 24 hrs, 300/ 1200 baud, Xmodem downloads, graphics, speech. Free. Sysop: Woody Large.

The Devil's Domain BBS. (916) 268-1127. 8-N-1, 24 hours, 300/1200/2400 baud. 4 sub-boards including main, music, jokes/war, and elite. Up/downloading. General files. Voting topics, online gaming. A BBS devoted to have fun! Sysop: Asmodeus.

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The Capitol Connection. (916) 442-0746. 300/1200 baud, 24 hours, 7 bits, even parity, 1 stop bit. The state's first policy-oriented interactive computer bulletin board. Established to test how computer communications can involve citizens in the process of governance. Participants may access over 15 "conferences" listing legislative data, information about the Legislature and the Public Utilities Commission, and other particulars; or they may enter comments and opinions regarding current regulatory issues and debates on the place of computers in civic life. Participants may also send each other electronic mail and download press releases dealing with topical events.

Dynasty BBS. (916) 685-8690. 300/1200/2400 baud, 8-N-1, 24 hours. ComputerRooters Bulletin Board. Sysop: Henry Hoover.

ASSOCIATIONS

Computer Professionals for Social Responsibility. The LA chapter is interested in computer reliability and preventing nuclear war, the socially useful direction of computer research, and similar topics. They meet most third Wednesdays at 7:30 pm at varying locations. Contact Rodney Hoffman, P.O. Box 66038, Los Angeles, CA 90066, (213) 932-1913 for more information.

Organization of Professionals, Educators, and Novices (OPEN). Tutorials, random access period, feature presentation, public domain library, and CP/M literature are all part of the monthly meetings of Osborne owners/users and MS-DOS transportables. Club BBS and newsletter. Call Frank L. Christ at (213) 498-4186 for more information. Meetings at Learning Assistance Center, CSU Long Beach, 3rd Wednesdays, 7 pm.

The North Orange County Computer Club. This group is the largest and perhaps the oldest in the county. It is affiliated with a large number of special interest groups and offers something for just about every user. General meetings are usually the first Sunday of every month in the Hashinger Auditorium, Chapman College, Orange. For info, call (714) 998-8080.

The South Orange County Computer Club. A general computer club that meets the first Tuesday of every month at 3545 Harbor Blvd., Costa Mesa. Meetings begin at 7:00 P.M.

Valley Computer Club. Monthly meeting at 7 pm, first Wednesday of month in Burbank Board of Realtors Bldg., 2006 W. Magnolia Blvd., Burbank. All types of micros represented. Contact W.R. Robinson, 11850 Louise, Granada Hills, CA 91344, (818) 368-1383.

San Diego Computer Society. Umbrella organization for over 40 Special Interest Groups (SIGs). Sponsors meetings, newsletters and annual computer fair. Meetings at Mesa College, 7250 Mesa College Drive, San Diego, 11:30-4, third Saturday each month. Contact Membership Chairman, P.O. Box 81444, San Diego 92138, (619) 549-3783. BBS (619) 549-3788.

Consolidated Computer Club. Dues $25 yr. For meeting place and time send SASE to David Nussbaum, 14200 Polk Street, #53, Sylmar, CA 91342-2966, or call (818) 362-9718.

Hughes Aircraft Computer Clubs. This club is for Hughes Aircraft employees only, but the BBS is open to everyone. Upload and download boards for Macintosh, IBM, Atari, Commodore, etc. Each board has its own public message service plus general message board. Contact Bud Grove, 21111 Dolores #146, Carson, CA 90745. BBS (213) 549-9640, 300/1200 baud, 24 hrs., 7 days.

Ventura Personal Computer User's Group. All MS-DOS and PC-DOS machines. Meetings 3rd Saturday 9 am-12 noon, Foster Library, 651 E. Main, Ventura. Contact Mike Regan, President, 301 Dana Point, Ventura, CA 93004, (805) 647-8273.

Micro User's Group — SFV Board of Realtors. Meetings 7232 Balboa Blvd., Van Nuys, 7 pm. third Thursday. Contact Mary Lou Williams, (818) 786-2110 for more information.

South Bay Computer Education Group. Supporting Apple, Atari, Commodore, IBM and compatibles, and TI99/4A. Meeting 2nd Wednesday of each month. Time 7 pm at 3675 Torrance Blvd., Suite 202, Torrance, CA 90503. Contact Jack Ward (213) 530-4879 or Judy Adams (213) 540-5010.

UCLA PC Users Group. IBM PC or compatibles owners welcome to join us on the 2nd Tuesday of the month, 7 pm. Public domain library , SIGs, BBS, seminars and newsletters. NPI Auditorium, UCLA, Westwood Plaza, Level C. For more information call (213) 473-6668.

Citizens Veto. For users with an interest in socio-economic issues who might want to try their equipment in working a model of a new approach. Primarily graphics and numbers, minimal text. Ewald O. Schlachter, (415)452-0151.

Pro*BUG—Professional Business Users' Group. Formerly Xerox Users Group. Meets 1095 Irvine Blvd., Tustin, 1st Saturday each month, 9 am. BBS (714) 543-3187, 300 baud, X-modem protocol. CP/M, PC, MS-DOS. Contact Allen Ashley, (714) 537-4608.

ICCA (Independent Computer Consultants of America. A nonprofit national association dedicated to the independent computer consultant. Its goals are to promote professionalism within the industry, increase awareness of ICCA to clients, and provide group benefits to members. Meets at Revere House, Tustin, 2nd Thursday, 6 pm. Contact Bill Creel, membership chairman, ICCA-OC, P.O. Box 3067, Santa Ana 92703, (714) 666-1981.

LAC-BUG (Learn About Computers—Beginner's Users Group. All computer owners and prospective owners eligible, ages 3 to adult. Educational materials and hands-on training included with membership. 24 hour telephone: (213) 372-8909. Mailing address: 6506 Arizona Avenue, Suite 127, Los Angeles, CA 90045.

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Network Users Association. 2111 Eisenhower Ave., Suite 400, Alexandria, VA 22314. (800) 638-8510 or (703) 683-8500.

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Apple Co-op. 290 SW 43rd, Renton, WA 98055. (201) 251-5222.

JUG (Jefferson State Computer Users Group). Many SIGs, newsletter. Dues $5.00 year, some SIGs additional. Contact JUG, P.O. Box 457, Gold Hill, OR 97525-0457.

MicroPro Users Group of America. National group with over 200 members worldwide. Dedicated to supporting MicroPro products, especially WordStar and InfoStar, for any hardware. c/o Procyon Associates, 140 Riverside Drive, New York, NY 10024. (212) 595-4811.

Golden Apple Club, Apple II and Macintosh Contact Stefano Minotto, Golden Apple Club, Riviera Tiso da Camposanpiero, 26, 35100 Padua, Italy.

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Getec s.r.l. Contact Silvio Esengrini, Via dei Guarneri Nr. 24,-20141 Milan, Italy. Phone: 39/2/5696502, 39/21 5694185.

Italtel S.p.a. Contact Michelangello Sala, C.Na, Castelletto, 20090 Settimo Milanese, Milan, Italy. Phone 39-2-4388-4288.

PLUG (The Plus/4 Users' Group). Dedicated solely to support of the Commodore Plus/4. No regular meetings, 200 members in US, Canada, Mexico, and Europe. Newsletter, public domain software library. P.O. Box 1001, Monterey, CA 93942.

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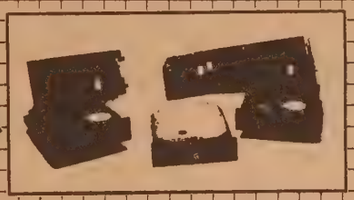

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The AppleWorks Users Group (TAWUG). c/o Regional Rep, 27421 Berenda Way, Hayward, CA 94544, (415) 887-7499.

FORTH Interest Group, International Office. P.O. Box 8231, San Jose, CA 95155. For further information call (408) 277-0668.

Apricot User Group (APRICUG). Box 98, Malverne, NY 11565.

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National TeleVideo Users Group. Meets 7:30 pm, 3rd Thursday, 1170 Morse Ave., Sunnyvale. P.O. Box 22007, San Francisco, CA 94122. Call for info—David, (415) 753-1552.

Apple Fontrix Club. Monthly newsletter. P.O. Box 29857, Thornton, CO 80229-0857.

N.A.B.V.I.C.U. - The National Association of Blind and Visually Impaired Computer Users. The purpose of this group is to gather information that will assist the blind or visually impaired person in utilizing the enromous potential of computers. It supports **CompuHelp**, a menu driven database-bulletin board programmed for use by the blind and visually impaired. It is available 24 hours a day, 7-days a week, 300/1200 baud, 8 or 7 bits, even or no parity, 1 stop bit. (916) 786-3923. Compuhelp is also available on disks. For more info, contact Otto C. Haiungs, Chief Executive Officer, Sysop, at P.O. Box 1352, Roseville, CA 95661-1352. (916) 783-0364.

28 Barbary Lane. Meets at 121 13th Ave. East, Seattle, WA, Fridays 8:00 pm. Contact A. Madrigal, (206) 323-2828. BBS: (206) 323-2828.

MICROenvironment: Microenvironmental Information Consortium For Researchers Overseas. World Headquarters, 712 Avery Rd. W. Winlock, Washington 98596, USA. Washington phone: (206) 262-0159. California phone: (415) 524-9309. Micro on MCI mail, ECONET & WELL. TELEX number 6502928733 via WUI.

American Computer Users Temporarily in Europe (A.C.U.T.E). Going overseas or already there? We are a users group dedicated to helping you better adjust and understand how to survive in the overseas environment with your computer system. We show you how to find things you will need at reduced member prices. We also consult firms and developers on how to make software more acceptable to the international market. We do foreign language translation of computer software and provide referral services. Further information available by mail: A.C.U.T.E., Postfach 4, D-8818 Lehrberg, West Germany.

Folklife Terminal Club. Almost Free Software. An international Commodore computer users group, with members in more than twelve countries, has made its software library available to other user groups and individuals. The club has issued new catalogs of software from its archives which contain more than 6,000 public domain programs. The programs are stored on diskettes and are usable in various configurations of PET, CBM, VIC, C-64, PLUS 4 and C-128 computers. The software itself is free. The first diskette that should be ordered is the new "CATALOG DISK" which contains an automatic disk cataloging program, a listing of all the available programs, complete instructions and Associate Membership in the club.

USER GROUPS

AT&T

AT&T PC6300 Users' Group. Meetings at various locations—contact BBS for latest information. Or write Eric Levinson, P.O. Box 7364, Burbank, CA 91510. BBS (818) 954-0530, 300/1200, 8-N-1, 24 hours.

ORCA - Orange Riverside Counties AT&T 6300 UG. Meetings bimonthly, second Saturdays, 11:30 am, at 2144 Michelson Drive, Irvine. Contact Chuck Patten, 1220 Page Circle, Corona, CA 91720, (714) 851-0119, ext. 234.

ADAM

Adam Users of Southern California. Come and keep the ADAM going. We have access to some of the people who developed software for ADAM and we are going to create a base for tips, reviews, and a BBS. Get on line with ADAM. Meetings at Airport College Center, Sepulveda and Century, 4th Sunday, noon. Contact Harvey Klein, 1736 S. Bedford, LA, (213) 553-1062 or Paul Shecter, 5545 Lindley, Tarzana.

ALPHAGRAPHICS

Alphagraphics. Contact Stella or Jim Muller, 16425 Bernardo Ctr. Dr., San Diego, Ca. 92128, (619) 451-2250.

AMIGA

Amiga Friends (AF). Contact Russ Kavanagh, (714) 898-2947. Call for more information, we'll see you there!

San Fernando Valley Amiga User Group (SFVAUG). Meets 2nd Thursday of the month, 7-10 pm, at American Legion, 7338 Canby Ave., Reseda. We've got demos, SIGs, newsletter, PD library, disk of the month, ANSWERS. Bring your AMI, we have lots of room now! Contact Randy Likins, (818) 709-0932.

Bits & Pieces Amiga Group of Anaheim. Meets every Tuesday 6:30-10 pm at 1130-A N. Kraemer Blvd., Anaheim, CA 92806. C-64, C-128, Amiga. Public domain software, technical help, guest speakers, much more. Contact John Callaci or Mike Dalton (714) 630-8644/630-8711 for information.

Color America. Amiga SIG meets 1-3 pm on the third Saturday of the month at Rosemead Community Center, 3936 N. Muscatel Ave., Rosemead. For information contact Mark Randall, 2227 Canyon Rd., Arcadia, CA 91006, (818) 355-6111.

Amiga Tech Users Group #1. Meets 4th Tuesdays, 7 pm, University Union, Cal Poly Pomona. Contact Mark Randall, (818) 355-6111. Call for more information, we'll see you there!

Amiga Tech Users Group #2. Meets at Rosemead Community Center, 3936 N. Muscatel Ave., near Valley Blvd., Rosemead, 1 pm, 3rd Saturday of the month. Contact Mark Randall, (818) 355-6111. Call for more information, we'll see you there!

Empire Amiga User Group (IEAUG). Meets 7 pm, 3rd Tuesday of the month, California School for the Deaf, 3044 Horace St., Riverside. Contact Paul Corbet (714) 684-6245. Call for more information, we'll see you there!

LA Amiga Users Group (LAAUG). Meets 3rd Wednesday, 7:30 pm, Veterans Memorial Auditorium, Culver and Overland Blvds., Culver City. Call (213) 387-3698 for more information. We'll see you there! BBS: (213) 559-7367.

West Side Amiga Users Group (WAUG). Meets 2nd Wednesday, 7:30 pm, John Adams Junior High School Cafeteria, 16th and Ocean Park Blvd., Santa Monica. Call (213) 451-0713, during the day, for more information. We'll see you there!

Apple/Valley Computer Club. Member interests include Apple, Amiga, IBM and others. Meetings are held on the 2nd Wednesday of each month, 7:30pm, at Valley Presbyterian Hospital, meeting room #3, 15107 Van Owen, Van Nuys, CA. For more info, contact Dr. William H. Trent, 6502 Kester Avenue, #7, Van Nuys, CA 91411, (818) 988-1752.

Ventura Amiga Users Exchange. (VAUX). Amiga users group for Ventura County. Meetings held on the second Monday of each month, 7:30 pm at the E.P. Foster Library, 651 Main Street, Ventura. Call (805) 646-7121.

AMSTRAD

West LA Amstrad. Meets every fourth Tuesday, 8:00 pm at Venice High School. Call (213) 397-7981 for further information.

APPLE

Original Apple Corps. First Apple group ever. SIGs for AppleWorks, Telecommunications, Educators, Macintosh. Meetings in the Santa Monica Mall, second Sunday of the month, 3rd floor Community room, 12 noon. Contact Rich Rollons (213) 378-0707, or Fred Duffy, (213) 396-5515.

The Orange Apple Computer Club meets 9 am-12 pm the first Saturday of each month in the Science Hall at Orange Coast College, Costa Mesa. We have over 700 members, ranging from beginners to certified Apple developers, and a large Apple II public domain software library. There are several very active special interest groups which include Apple III, educators, Apple II, modem and investors. For further info call (714) 770-1865.

South Bay Apple III User Group. Over 85 Apple III users share information, programs, group purchases, product demos. Special interest groups meet 1st Tuesdays. General meetings on IIIrd Tuesdays at 7:30 p.m., UCLA Harbor General Hospital, Room III. Corner of Vermont and Carson, off 110 Fwy. Contact Gary Fortune, P.O. Box 432, Redondo Beach, CA 90277, (213) 316-7738.

Tri City Apple User's Group (Glendale, Burbank, Pasadena). New group formed from merger of Pasadena and Wabash groups. Meetings are scheduled the third Thursday of the month at Casa Colina Neurological Learning Center, 50 North Hill St., Pasadena at 7:30 pm. Contact Marie Kaden at (818) 846-6682. Dues $12./yr.

North San Diego Apple Club. Meets 1st Tuesday of each month at Meadowbrook Middle School, Meadowbrook Lane, Poway, 7 pm. Contact Bill Walker (619) 579-9649 or Chuck Newby (619) 566-0387, P.O. Box 75, Poway, CA 92064.

SD Alliers. Want to start Apple III user group in San Diego area. Contact James Fair, P.O. Box 1592, Lakeside 92040, (619) 561-3270.

Applejacks of the Inland Empire. Primarily for Apple II users. Meets first Wednesday and third Thursday of the month, 7-9 pm, at Norman Feldheym Central Library, 555 W. 6th St., San Bernardino. Contact Scott Zehm at (714)883-2234 for information, or write Applejacks, P.O. Box 23025, San Bernardino, CA 92406.

Appleholics Anonymous of Ventura County. Software library, club BBS, newsletter, hardware and software demos. 150 members. Meetings sometimes vary—call to verify (805) 482-3501, 484-2611, 659-5326, 985-9781. Meetings 3169 Telegraph Road, Ventura, 9:30 am, usually 2nd Saturday.

PVAUG-Pomona Valley Apple Users Group. Meetings are held on the first Saturday of each month. For time and location, contact Victor Michael at (714) 629-0540.

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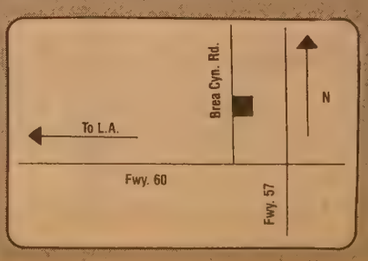

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Apple/Valley Computer Club. Member interests include Apple, Amiga, IBM and others. Meetings are held on the 2nd Wednesday of each month, 7:30pm, at Valley Presbyterian Hospital, meeting room #3, 15107 Van Owen, Van Nuys, CA. For more info, contact Dr. William H. Trent, 6502 Kester Avenue, #7, Van Nuys, CA 91411, (818) 988-1752.

APRICOT

Apricot Roundtable Group of Hapless Hackers (ARGHH!) An Apricot user's group is forming in east Long Beach, open to any Apricot, XI, F1, F2, F10 or FP user, or anyone else with MS- or PC-DOS and 3½" disk drives. Phone Jim Bliss at (213) 425-6302. Meetings 7–10 pm, 3rd Wednesdays or at such other time as membership decides, at 7215 Killdee St., Long Beach, CA 90808.

ASHTON-TATE

dBUG-dBASE Users Group. For all levels of dBASE users from beginners to expert. Meets 3rd Monday each month, 7-9 pm, Blue Cross Bldg., 21555 Oxnard, Woodland Hills. For more info contact Bruce Ascough, (818) 789-0723.

dBASE III SIG of UCLA PC Users Group. Meets once per month in Santa Monica—date varies. Contact Tom Rombouts, 1428 N. Curson #6, LA, CA 90046, (213) 874-7471.

dVALLEY dBASE Users Group. Largest and most active dBASE group in So. Calif. Meets 4th Monday of the month in Van Nuys. Large meeting room with plenty of parking. Dedicated to dBASE and its add-ons, all levels. Large cataloged library of programs and routines. Exciting group learning projects, "fix-it-session" at every meeting, plus speakers and demos. For information contact Louie Astorga, President, c/o Real Estate Services, P.O. Box 7140, Canoga Park, CA 91304-7140. (818) 998-3210.

ATARI

Atari Computer Association of Orange County (ACAOC). Join one of the biggest Atari user groups in Southern California. Monthly magazine, large public domain library, and club BBS. Dues $24.00/year, $18.00 for non-attending out-of-town members. Meetings at Golden West College, Room 131, Huntington Beach, 1 pm, fourth Sunday of the month (ST meeting same time and place on second Sunday). P.O. Box 9419, Fountain Valley, CA 92728 or (714) 838-3099 for more information.

West LA Atari Users Group. Come join fellow Atarians! Dues are $25.00/year. Newsletter, P/D library, ATR-Sig, discounts, guest speakers. Please call for directions to meeting room! If you're reading this, you belong with us. Meetings first and third Wednesday of the month, 7:30 pm, Lincoln Park, Santa Monica, Wilshire & Lincoln. Contact Bill Skurski (213) 552-4739.

Los Angeles Atari Computer Enthusiasts (LAACE). Join Los Angeles' largest and oldest Atari Users' Group, now in our 6th year. Enjoy our monthly meetings and newsletter. Participate in our educational SIG (Special Interest Groups) seminars and meetings. Learn how to get the most out of your Atari; access our hundreds of public domain programs; benefit from the help and experience available from our experts. Come as our guest on the 1st Tuesdays of the month (2nd Tues if holiday occurs in 1st week) at 7:00 pm at Granada Hills High School, 10535 Zelzah Ave., Granada Hills, CA. For full benefits, including member access to our 10 meg BBS, dues are $20/yr ($25 for entire family). Write P.O. Box 7752, Van Nuys, CA 91409 (include your phone number) for additional information.

Santa Clarita Valley Atari Computer Enthusiasts (SCV-ACE) invite you to join us. Meetings are the first Thursday every month from 7 to 9 pm at the Moose Lodge, 18000 W. Sierra Hwy., (1/2 mile north of Soledad Canyon Road), Canyon Country. For info call Bob at (805) 259-6540.

Atari Computer Enthusiasts Network (ACENET). Umbrella group representing many Southern California Atari groups. If you can't locate a user group in your area, contact John Tarpinian at 6055 Cahuenga Blvd., #2, North Hollywood, CA 91606, (818) 760-1831.

Hooked on Atari Computer Keyboard Society (HACKS). Meetings on the first Saturday of the month in the Burbank area. For more information contact John Tarpinian, 6055 Cahuenga Blvd., #2, North Hollywood, CA 91606, (818) 760-1831.

AA-Atari Users Group. Meets at Upland Public Library, 450 N. Euclid Ave. Atari 400, 800, XL/XE group meets second Tuesday, 6-9 pm. Call Juan Valdes, (714) 980-6841 for more info. 520/1040ST group meets fourth Thursday 6-9 pm. Call Jay McCarthy, (714) 829-8722 for more information.

MAST—Mid-Cities Atari ST. Meetings at 9025 E. Artesia Blvd., Bellflower, first Sunday, 7 pm. Contact Jane Hughes, 9701 E. Artesia Blvd., Bellflower, (213) 867-0626.

South Bay Atari Computer Enthusiasts (S.B.A.C.E.). Meets 2nd Tuesdays, 7:30 pm, VFW Hall, 1865 Lomita Blvd., Lomita. Meetings consist of guest speakers from software and hardware suppliers, demos by members, q & a periods, along with current Atari rumors. Newsletter, published 6 times a year, included with $20/yr membership fee. Write S.B.A.C.E., P.O. Box 83668, Los Angeles, CA 90083, for more information, or call Dick Reaser, (213) 645-7063.

Pasadena Area Local Atari Computer Enthusiasts (PALACE). Meets monthly in the Monrovia area on the third Tuesday of the month. Contact Chris Roberts, sysop of PALACE BBS, (818) 359-1697.

AUTOCAD

AutoCAD Los Angeles Users Group. Meetings fourth Thursday of the month (except November and December—Meetings Nov. 20 and Dec. 18), Church of Religious Science, 260 North Pass Ave, Burbank. Contact Tesfaye Abagaz, (818) 843-5770 (work).

COMMODORE

San Diego Commodore Users Group. Meets third Wednesday, 7 pm, 2557 3rd Ave. (Women's Club), San Diego. For all Commodore machines. Contact Jane Campbell, (619) 584-2872 for more information, or write: P.O. Box 86531, San Diego, CA 92138-6531.

San Fernando Valley Commodore Users Group. Meets second Wednesday of the month at Patrick Henry Junior High on Louise Ave. between Devonshire and San Jose in Granada Hills, near 118/405 freeway interchange. Contact Tom Lynch, 21208 Nashville, Chatsworth, CA 91311, (818) 709-4736.

San Luis Obispo Commodore Computer Club 1766 9th St., Los Osos, CA 93402. (805) 528-7475 BBS.

The Commodore Users Group - San Juan Capistrano. This group of C64 users meets the second Saturday of every month from 9:00 am till 12:00 at Great American Federal Savings and Loan, 32232 Camino Capo, San Juan Capistrano. For info call 496-5745.

Orange County Commodore Technical User's Group C-TUG. Orange County's Commodore user group. Club newsletter, two 300/1200 baud BBSs, door prizes, SIGs in Comal, DOS protection, data bases, wpros, and BASIC. Custom software and ROM chips, and just plain good times. Meetings at Mercury Savings and Loan, 4th and Newport, Tustin, fourth Sunday of the month, 10:30 am. Contact Ellis L. Higham, corresponding secretary, P.O. Box 8342, Orange, CA 92664, (714) 554-9222.

Hollywood User Group (HUG) for Commodore computers. Meets 2nd Saturday of the month at Plummer Park, Conference Room, 7377 Santa Monica Blvd., West LA at 12 noon. Contact HUG BBS (213) 874-8256 (24 hrs) or write HUG, P.O. Box 38313, Hollywood, CA 90038.

Southern California 64 Users Group. Learn more about your Commodore 64. Extensive public domain disk library. Meet at Mid Cities Bank in Gemco shopping center on Bellflower, just south of 91 Freeway, 7 pm, 3rd Tuesday of every month. Contact Joe Allain, 3852 Riverton, Studio City, CA 91604, (818) 985-2647.

C-128 West UG. User group for owners of the Commodore C128, from beginner to advanced; PD software available. New group still assessing the needs and interests of members. Intend to network with other user groups on C128 software. Meetings 2nd Tuesday, 7:15 pm, McKinley School in Santa Monica, Santa Monica Blvd. and Chelsea. Contact Don Campbell (213) 828-9308.

Inland Empire IBM/C64 User Group. Major subjects are local area networks, small business software, data communications. Send SASE for free newsletter with dates and software library. Contact Winfried Hofacker, P.O. Box 988, Chino Ca 91708-0988.

Commodore Creations Users Group (CCUG). We offer library, newsletter, and other services; upcoming BBS; soon to be member of Commodore World. Meets 2nd or 3rd Sunday of each month 2-4 pm. Membership dues $26 per year. Call or write for info: Brian R. Klotz, 1135 Coronet Ave., Pasadena, CA 91107 (818) 351-8198.

Back-Country Commodore Club. Meets first Thursday 7 pm, Ramona Lutheran Church on 14th St. Check us out for relaxed, informative group discussions. We're here to help those with problems and to promote better uses of Commodore 64s, 128s, and Amigas. Contact Gerry White at (619) 789-3209, 511 14th St. #D-13/P.O. Box 373, Ramona, CA 92065. Meetings at 617 16th St., Ramona, CA 92065, 7 pm, 1st Thursday each month.

General Dynamics Commodore Computer Club. Meets third Tuesdays, 4:30 pm, Convair Rec. Assn. room C. Commodore 64 and 128 only. Contact Al Wilson, (619) 429-6790 for information.

C.U.B.E. Commodore Users, Buffs, and Enthusiasts meet first and third Mondays of each month, 7:30 pm, East Side Christian Church, 668 Obispo, Long Beach. Contact Lynn Cothern, 2005 Palo Verde #163, Long Beach, (213) 421-1041 modem.

Com-Pacs. Meetings and/or copies of public domain software and discussion of problems. New computer C64/128 technologies. Sales and swaps of equipment. Meetings at 2354 Elmgrove St. Los Angeles, CA, Saturdays, 3 pm. Contact Lon Damiani, (213) 222-2277.

PLUG (The Plus/4 Users' Group). Dedicated solely to support of the Commodore Plus/4. No regular meetings, 200 members in US, Canada, Mexico, and Europe. Newsletter, public domain software library. P.O. Box 1001, Monterey, CA 93942.

Pacific Computer Club (Commodore). Meetings 391 S. Madison, Pasadena, 2nd Thursday, 7 pm. Contact Norman Sauppe, (818) 792-9840.

FCUG/SixtyFourum. PD library, newlsetter, meeting 3rd Saturdays, 8:30 am. Contact George Bearden, P.O. Box 16098, Fresno, CA 93755, (209) 291-7053. BBS (209) 431-6288.

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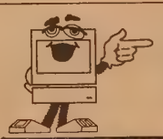

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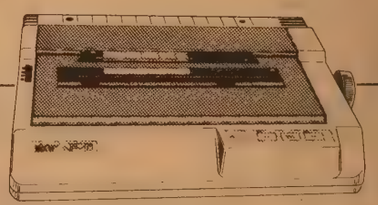

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Central Coast Commodore Users Group. Meets 3rd Tuesday of each month. Contact Gilbert Vela, 4237 Plumeria Ct., Santa Maria, CA 93455. CCCUG BBS (805) 934-2216, 24 hrs/7 days, 300 baud, Punter BBS protocol for downloads.

Diamond Bar User Group (DBUG). The Diamond Bar User Group is dedicated to the Commodore line of computers, C64, C128, and the Amiga. The club has a large public domain software library base, especially Commodore CP/M. Free raffles, technical discussions, software demonstrations, and the monthly freebie disk can be found at most any meeting. Meetings 2nd and 4th Wednesdays, 7 pm, Diamond Bar Library, 1061 S. Grand Ave., Diamond Bar, CA. Contact David Dietzel, (714) 947-1882 for more information.

South Orange County Commodore Programmers and Users (CPU). Meetings at Great American Savings, 23688 El Toro Road, El Toro, third Saturdays, 9 am. Contact Don Gribble, President, 25401 Champlain Rd., Laguna Hills, CA 92653, (714) 830-2430 or (714) 855-8320.

West Orange County Commodore User Group. Meetings 1st Sundays, 1 pm, Mercury Savings, Buena Park, corner of Valley View and Lincoln. Write for info: P.O. Box 6441, Buena Park, CA 90622; or call Mark Stanford, (714) 772-4182 or Art Collins (714) 821-0195.

Bits & Pieces Amiga Group of Anaheim. Meets every Tuesday 6:30-10 pm at 1130-A N. Kraemer Blvd., Anaheim, CA 92806. C-64, C-128, Amiga. Public domain software, DOS classes, technical help, guest speakers, newsletter and much more. IBM group meets first and third Saturdays of the month at 10:00 am to 2:00 pm. Sponsored by Transnational Electronics. Contact John Callaci or Mike Dalton (714) 630-8644/630-8711 for information. BBS: (714) 630-5619.

The Pasadena Commodore Computer Club meets the first and third Wednesday of the month at 7 pm in the Circadian Room of the cafeteria on the campus of Pasadena City College, SE corner of Colorado and Hill. For more information write to PCCC, P.O. Box 1163, Arcadia, CA 91006, or call (818) 447-2212 after 2:30 Pacific time.

Osborne Komputer Owners Klub (OKOK) is a microcomputer user group serving a variety of computers: Osborne, Kaypro, Commodore C128, IBM and clones. As an affiliate of FOG, we serve both MS-DOS and CP/M operating systems. We offer monthly meetings, classes, public domain software library, electronic bulletin board and special purchase opportunities. Meetings third Wednesday of the month, 7:00–10:00 pm. Meetings held at the Altadena Public Library, 600 E. Mariposa, Altadena, CA. Contact Lionel Soracco, (818) 794-3243, or write OKOK, P.O. Box 40429, Pasadena, CA 91104.

Commodore Helpers User Group Of Long Beach.(CHUG). Meets second Saturday of each month, 9:00 am to 12:00 noon at Mercury Savings Bank, 4140 Long Beach Blvd. Dues $12.00 a year. Visitors and families welcome to attend. Support the C64, C128 and Amiga. Q-Link, SIG and more. Newsletter distributed at meeting. Demos and more. We welcome people who need help with their Commodores. Free disk for members at each meeting. Soon to come: area BBS for users and professional software demos. If you have any questions call Rodney Hayes, president, at (213) 863-8420, from 6:00 pm to 10:00 pm, M-F.

Success. Commodore group meets at 18th and Oak, Paso Robles, CA on the second Tuesday of the month at 7:00 pm. Contact Wayne Weichel (805) 238-6294 for information.

CORDATA

Cordata Users Group. Meets 2nd Fridays, 7 pm. 20630 Lassen St., Chatsworth. Contact Alicia Fahey, (818) 709-6202 for information.

DEC

DECUS Inland Empire PC-LUG Digital Equipment Computer Users Society. Free to all DEC users; Decmates, Rainbows, Professionals; P/D software; guest speakers; software /applications assistance available; FIDO bulletin board. Meets Cal Poly-Pomona campus, Library Bldg 15, Room 12, 7:30 pm 3rd Tuesday of each month. Contact Jan Snyder, 380 Verona St., Upland, CA 91786, (714) 620-7511 ext. 4376.

DECUS Southern California PC-LUG. Digital Equipment Computer Users Society. Free to all DEC users; Decmates, Rainbows, Professionals; P/D software; guest speakers; software/applications assistance available; FIDO bulletin board. Meets 10:30 am, 1st Saturday of the month, Press Telegram Bldg., 3rd Floor, 604 Pine Ave., Long Beach, CA. Contact Bill Davis, 1457 W. 219th St., Torrance, CA 90501. (213) 827-4600.

DECUS Rainbow Pacific PC-LUG Digital Equipment Computer Users Society. Free to all DEC users; Decmates, Rainbows, Professionals; P/D software; guest speakers; software /applications assistance available; FIDO bulletin board. Meetings at Digital Equipment Corporation, 6101 W. Centinela Ave., Culver City, CA 90230, 7 pm, 2nd Wednesday of each month. Contact Don Braums, 3312 Summertime Lane, Culver City, CA 90230, (213) 202-1784.

EASYBUSINESS

Easybusiness Systems Users Group. CPAs, Consultants, and other business people interested in Computer Associates Easybusiness Systems' Accounting Software. For information, contact Gary Robinson (213) 398-6544.

EPSON

Cursor Club Epson 402 W. Arrow Highway, Suite 6, San Dimas, CA 91773. (714) 559-8361, Bulletin Board: (714) 592-6316.

San Fernando Valley Epson User Group. Meetings at Fallbrook Square Community Room "The Meeting Place" off the Food Court in the new Fallbrook Mall, 6633 Fallbrook Ave., Canoga Park, between Victory and Vanowen. Meets 3rd Wednesday of each month at 7 pm. Contact Pat Denslow, (818) 881-4029 for information.

Epson Users Group of Orange County. 6075 Jeffrey Mark St., Cypress, CA 90630, (213) 414-4817.

Epson Users of San Diego. P.O. Box 87448, San Diego, CA 92138, (619) 560-7604.

High Desert Epson Users Group. 933 Cottonwood Drive, Barstow, CA 92311, (619) 256-3541.

PSC/QX. 2934 Wilshire Blvd., Santa Monica, CA 90403, (213) 453-4535, Bulletin Board: (213) 474-4952.

South Bay Epson Users Group. 1115 Cerise Avenue, Torrance, CA 90503, (213) 328-9916, Bulletin Board: (213) 618-1940.

Epson Computer Club of America. Monthly meeting 2nd Saturday of the month at 10 am, Mercury Savings and Loan, Irvine Blvd. one block east of Newport Ave. Messages Epson West Bulletin Board (714) 630-7104 User area B:15. Monthly newsletter "The Help Key." Contact Roy Boorman, 4021 Winterhaven St., Yorba Linda CA 92686, (714) 524-9483.

Epson User's Group of Orange County. Meets on 3rd Saturday of the month from 10 am to 12 noon at 2111 Main Street, Huntington Beach, CA 92648. Contact Richard A. Petersen. 7282 Mast Dr., Huntington Beach, CA 92646. (714) 536-6979.

FORTH

FORTH Interest Group, Los Angeles Chapter. Meets 4th Saturday, 10 am, Hawthorne Public Library, 12700 S. Grevillea, Hawthorne. Contact Phil Wasson (213) 649-1428.

FORTH Interest Group, Orange County Chapter. Meets 1st and 4th Wednesdays, 7 pm. Call Noshir Jesung for info. (714) 842-3032.

FORTH Interest Group, San Diego Chapter. Meets weekly, Thurs., 12 noon, contact Guy Kelly (619) 268-3100 ext. 4784.

HEATH

Los Angeles HUG (Heath Users Group). A support group for users of Heath/Zenith computers. Monthly speakers, software library, information exchange, newsletter. Meetings open to visitors. Meetings at 2309 S. Flower St., LA 90007, first Thursday of each month at 7 pm. Call Tom Davis for information at (213) 462-2642.

LUV-A-HUG Heath /Zenith User's Group. Meets 2nd Thursday of each month, 7pm, at Heath /Zenith Computers and Electronics, 22504 Ventura Blvd. Woodland Hills, CA 91364. A users group dedicated mainly to the Heath/Zenith line of computers, but anyone interested in computing is welcome. Dues are $12/yr, which includes group newsletter and copying of public-domain software from extensive library of PC-, Z-100, and CP/M compatible software. For more info contact John Rotondi, between 10:00 am and 6:00 pm at (213) 874-9344. BBS (818) 772-0384.

HEWLETT-PACKARD

Club of Hewlett - Packard Hand-Held Users (CHHU). HP handheld users worldwide support CHHU as a noncommercial, open, independent club dedicated to applying today's machines and making a contribution to the true personal computer of tomorrow. Send SASE for more info to Richard J. Nelson, 2545 W. Camden Place, Santa Ana, CA 92704, or call (714) 754-7757 for meeting directions.

LA-SCRUG. Hewlett - Packard Series 100 business computer user group. Demonstrations and seminars on HP software and equipment. Meetings at 5161 Lankershim Blvd., North Hollywood, 7-9 pm, 2nd or 3rd Thursday of the month. Contact Dave Mark, P.O. Box 60975, Pasadena, CA 91106, (818) 794-4969.

Hands-On Computer User Society (HOCUS). Meets the 1st and 3rd Thursday of the month, 6:30 pm, at 473 E. Colorado Blvd. Pasadena, 91101. Informal, hands-on problem-solving using various HP personal computers. Contact Dale Thorn c/o Logic Tree Computer Center, 463 E. Colorado Blvd., Pasadena 91101. (818) 440-9279.

IBM

The Greater South Bay IBM PC Users Association. Any L.A. area PC or compatible owners are welcome to attend these meetings at the TRW cafeteria on Compton Blvd. Meeting time is 7:00 pm on the third Thursday of each month. For info call (213) 398-8153.

Technical Users Group (TUG-NET). For CP/M & MS-DOS PC users. Meets on the first Thursday of each month at 7:00 pm. Valley Plaza Park, Community Room, 12240 Archwood St., North Hollywood, CA. Contact Mike Faith - (818) 994-6567. DOS SIG meets 3rd Mondays, 7 pm, Sears S&L, Van Nuys. Call (818) 701-0512 for information. BBS (818) 882-6045.

UCLA PC Users Group. IBM PC or compatibles owners welcome to join us on the 2nd Tuesday of the month, 7 pm. Public domain library , SIGs, BBS, seminars and newsletters. NPI Auditorium, UCLA, Westwood Plaza, Level C. For more information call (213) 473-6668.

Pasadena IBM User's Group. Meets 3rd Wednesday of each

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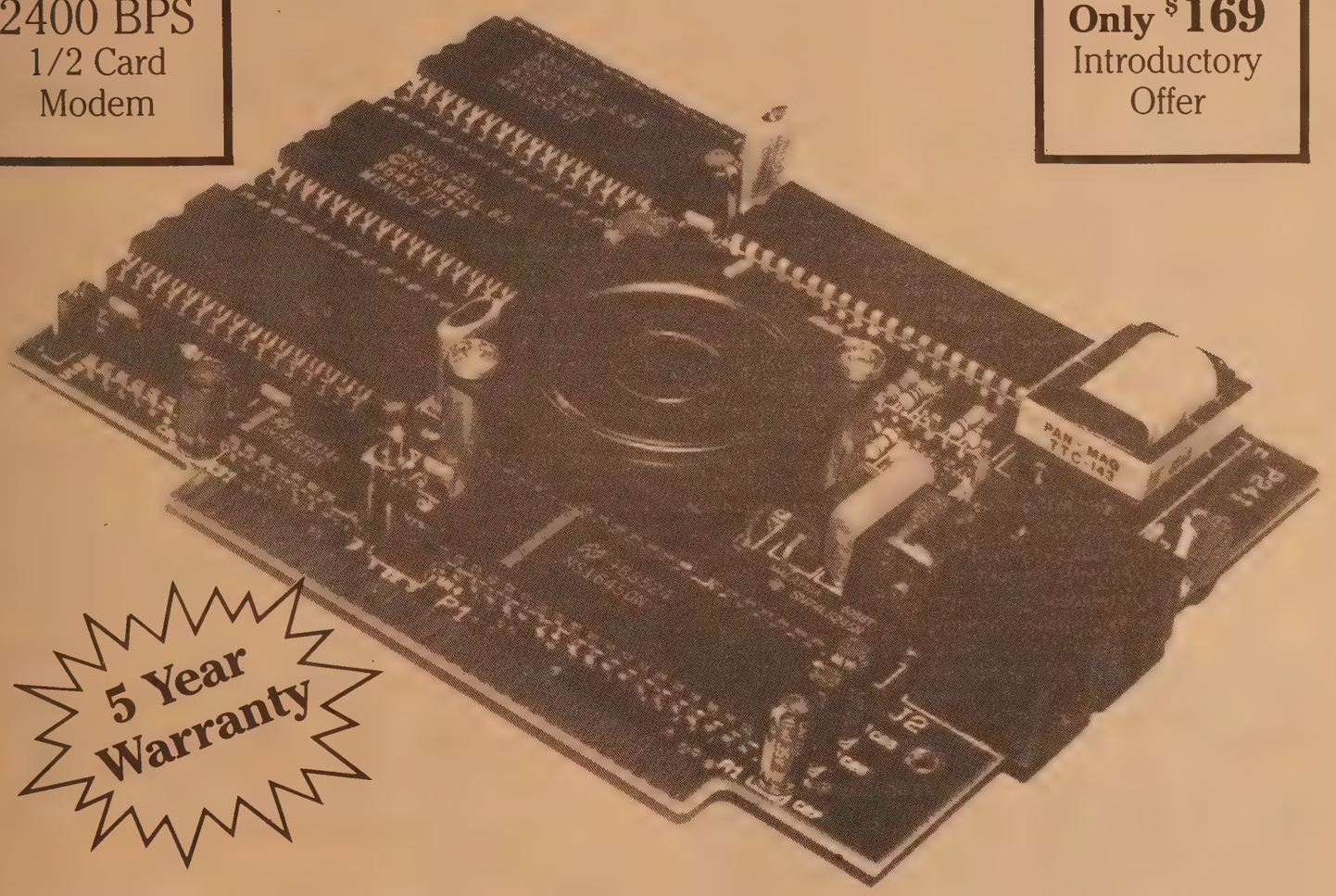

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month at Cal Tech, Bridge Building, Room 201. For more info send SASE to Steve Bass, 711 E. Walnut Street #306, Pasadena, CA 91101, (818) 795-2300.

Inland Empire IBM/C64 User Group. Major subjects are local area networks, small business software, data communications. Send SASE for free newsletter with dates and software library. Contact Winfried Hofacker, P.O. Box 988, Chino Ca 91708-0988.

The Foothill Computer Club. An IBM-PC users group. CCCUG — Crescenta-Canada-Compatible Users Group. P.O. Box 1265, La Canada, CA 91011, (818) 790-6672. Meetings 1st Wednesday of the month at 6:30 pm at the Glendale Federal Bank, 2350 Honolulu, Montrose, CA. For newsletter send SASE to above address.

NOCCC Lotus & Business SIG. Subgroup of North Orange County Computer Club. Meets first Sundays at Chapman College in Orange, CA, 11:15 am. Lotus 1-2-3 and business application demos, speakers. Call to verify dates, address: Vance Joachim, (714) 998-8080. P.O. Box 3616, Orange, CA 92665.

The Riverside IBM Computer Club. Meetings at Computerland Riverside, Monday 7 pm. We specialize in software demonstrations, sharing of public domain programs, and mutual problem solving activities. Contact Jimmie E. Heidecke, (714) 685-5407 for info.

Orange Coast IBM PC User Group. A not-for-profit organization open to anyone with or considering the purchase of an IBM PC or compatible computer. Monthly meetings, usually on the last Saturday of the month, consist of one or two guest speakers, a short business session and a period for random access. OCIPUG has public domain and user supported software, a monthly newsletter and a bulletin board. Membership is $20 per year. Meetings at Orange Coast College, Science Hall, Costa Mesa, last Saturday of the month, 9 am–12 noon. Contact Tom Sutro, P.O. Box 6100-211, Costa Mesa, CA 92628, (714) 850-0474.

Valley Computer Club. IBM PC Users Group meets first Wednesday each month. The group is part of Southern California's original computer club. Its purpose is to distribute public domain software and exchange info on the PC. Meetings at 2006 W. Magnolia Blvd., Burbank, 7 pm. Contact Sy Lieberman, (818) 981-9593.

Kern Independent PC User Group (KiPUG). Meets the 2nd Thursday of each month beginning at 7 pm at the County Superintendent of Schools Boardroom, 5801 Sundale Ave., Bakersfield. Contact Jim Harrer, P.O. Box 2780, Bakersfield, CA 93303, (805) 395-0223.

Bits & Pieces IBM of Orange County. Meets at 1130-A N. Kraemer Blvd., Anaheim, every Saturday at 10 am. Call John, (714) 630-8644 for more information.

Ventura Personal Computer User's Group. All MS-DOS and PC-DOS machines. Meetings 3rd Saturday 9 am-12 noon, Foster Library, 651 E. Main, Ventura. contact Mike Regan, President, 301 Dana Point, Ventura, CA 93004, (805) 647-8273.

Thousand Oaks Personal Computer Club (TOPCC). Meets fourth Thursday, except November and December (3rd Thursday), at CAL Lutheran Univ., 60 W. Olson Road, Thousand Oaks. 6:30 pm beginners, 7:30 regulars. Group is five years old and has approximately 150 members. Contact Bob Tracy, (805) 482-7092 for more information. BBS: (805) 499-8378.

Southwest PC Users Group. All computer users are welcome. Meetings 3rd Saturday of each month; call for meeting place. Christine Tripp, (213) 935-4105.

Tulare County PC. Meetings at Genesis Computers, 3rd Thursday each month. Call Roger Jenan, (209) 733-8204 for information.

Claremont Computer Club. This club is for any interested IBM PC or compatible users. Meetings start at 7:30 pm on the 3rd Monday of the month. Call (714) 626-2268 for meeting location and information.

Apple/Valley Computer Club. Member interests include Apple, Amiga, IBM and others. Meetings are held on the 2nd Wednesday of each month, 7:30pm, at Valley Presbyterian Hospital, meeting room #3, 15107 Van Owen, Van Nuys, CA. For more info, contact Dr. William H. Trent, 6502 Kester Avenue, #7, Van Nuys, CA 91411, (818) 988-1752.

Osborne Komputer Owners Klub (OKOK) is a microcomputer user group serving a variety of computers: Osborne, Kaypro, Commodore C128, IBM and clones. As an affiliate of FOG we serve both MS-DOS and CP/M operating systems. We offer monthly meetings, classes, public domain software library, electronic bulletin board and special purchase opportunities. Meetings third Wednesday of the month, 7:00–10:00 pm. Meetings held at the Altadena Public Library, 600 E. Mariposa, Altadena, CA. Contact Lionel Soracco, (818) 794-3243, or write OKOK, P.O. Box 40429, Pasadena, CA 91104.

KAYPRO

Lakewood/Long Beach KUG is a group of Kaypro computer owners dedicated to helping each other solve problems and share information and public domain software. The meeting is open to all. Meetings at Midcities Bank, 9025 Artesia, Bellflower, CA, 2nd Wednesday of each month; 7 p.m. Contact Melvin Pasley, 4566 Shadeway Rd., Lakewood, CA 90713, (213) 421-3094.

Kaypro UG, 3134 N. Palm Shields, Fresno, CA 93704.

K-West, Orange County Kaypro users group. Meetings 2nd Monday of the month, Glendale Federal Savings, 100 Newport Center Drive, Newport Beach.

Club 16. Meets once a month in Costa Mesa at 2790 Harbor Blvd., (CBS Store) to share knowledge of the 16 bit world. It is a small group so that everyone can get to know each other and share. Large public domain library. Contact Peggy Lloyd, (714) 645-9868 for information.

LA Kaypro Users' Group. Primarily CP/M users, all brands welcome. Meets 3rd Tuesday, 6:30-9:30, Beverly Hills High School, 241 Moreno Ave., 3rd floor cafeteria, near Olympic and Spalding. Contact Allyn Franklin or Barry Cole, (213) 278-3748 or (213) 390-3851 after 11 am please.

Kayos Kaypro Users Group. Kayos Kaypro User Group invites Kaypro and CP/M users to meetings at TRW in Redondo Beach, 6:30 pm, third Monday of the month. (213) 379-8339 for details.

TUG-NET Kaypro and Osborne SIG meets 4th Thursdays, 7 pm, Central Savings, 4464 Van Nuys Blvd., Sherman Oaks. Call (818) 882-1693 for information.

Osborne Komputer Owners Klub (OKOK) is a microcomputer user group serving a variety of computers: Osborne, Kaypro, Commodore C128, IBM and clones. As an affiliate of FOG, we serve both MS-DOS and CP/M operating systems. We offer monthly meetings, classes, public domain software library, electronic bulletin board and special purchase opportunities. Meetings third Wednesday of the month, 7:00–10:00 pm. Meetings held at the Altadena Public Library, 600 E. Mariposa, Altadena, CA. Contact Lionel Soracco, (818) 794-3243, or write OKOK, P.O. Box 40429, Pasadena, CA 91104.

LEADING EDGE

OCTIPUG-SIG. Forming Leading Edge user's group. Will organize to teach DOS, Framework, d-BASE III, utilities and public domain software. Meeting times and address to be announced. Contact Michael Banyacki, 24992 Spadra Lane, Mission Viejo, CA. (714) 770-3172. Leave name and phone number.

LOTUS

Los Angeles Lotus Users Group. Demonstrations, problem-solving, third-party applications, etc. For Lotus 1-2-3 and Symphony. Informal and fun. 7–9 pm, Burbank church of Religious Science, 3rd Thursday each month. Take 134E to Pass, N. 1 block. Call Don Roark, President, (818) 905-1441 for information.

MACINTOSH

Los Angeles Macintosh Group (LAMG) Be a part of the best Mac group in So. Calif. Many SIG and local groups to choose from including desktop publishing, OMNI, business, education and more. Monthly main meeting at McKinley Elementary School, Santa Monica Blvd. at Cloverfield, Santa Monica. Membership $25 annually includes 12 issues of MacDigest newsletter, access to public domain library, discounts at local stores. Call Eric Anderson, (213) 278-LAMG for information.

Ventura County Macintosh Club Mac and Lisa users invited. Membership $21/yr.; newsletter, software library, discussions and ideas. P.O. Box 7754, Oxnard, CA 93031, (805) 983-1610, (805) 499-2824.

Mac Valley Users Group. For $20/yr. membership fee you too can enjoy meetings chock full of software/hardware presentations, public domain software library, Mac articles index, software and accessory raffles, and help hotline. Broad range of users, very friendly to novices. Meetings at Burbank High School Cafeteria, Burbank Blvd. at 3rd St., Burbank, CA, third Tuesday of the month, 7:30 p.m. Contact Ruth Stever, P.O. Box 4297, Burbank, Ca 91503, (818) 848-1277.

MAC-HACers. Macintosh computer club for Hughes Aircraft employees only. Meetings 3rd Wed. each month, H.E.S.E.A. Club House, 1216 Imperial, El Segundo, CA 90745, across from LAX, 5 pm. Contact Bud Grove, (213) 606-2212, 5am-3pm, (213) 549-9664.

Orange Apple Macintosh Group. The Macintosh Meeting of the Orange Apple Computer Club meets 1 pm-4 pm the 1st Saturday of each month in the Science Hall at Orange Coast College, Costa Mesa. We have the best of the public domain software for the Mac, and several fun special interest groups which include Fast Start, Mac Modem, and Deciphering Mac Public Domain. For further info, call (714) 770-1865.

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MacBuddhist. Learn about computer assisted dharma study and application to daily living. Network of on-line Bodhisattvas sharing material crossing sectarian lines. Monthly meetings, last Saturday of the month. Write: 2605 N. Beachwood Drive, Los Angeles, CA 90060,

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Corporate User Groups SIG of Los Angeles Macintosh User Group establishes communication between leaders of Macintosh User Groups of companies in the greater Los Angeles area. The main purpose of the group is to share information on Macintosh use in corporations. It also consults company recreation clubs in starting and supporting company Macintosh groups. Contact Charles Shipp, (213) 970-6300w, (213) 833-9186h, for more information.

San Gabriel Valley Mac Users Group. Meets once a month to disseminate information about the Macintosh. Meetings are held on the first Thursday of every month at the City of Hope in Duarte, 7:30 pm in cafeteria complex Room B. The SGVMUG has special interest groups such as Power Users' SIG and a Novice SIG. Public domain library, monthly newsletter. Membership is $20 per year. Contact Frank Chavez on the 24 hour information line (213) MUG-ICON, or write SGVMUG, P.O. Box 792, Sierra Madre, CA 91024.

Macintosh Computer Society. General meeting on the 1st Thursday of each month at 23 Civic Center Drive, Northwest corner of Santa Ana Blvd. and Rose Street. Meeting time 7:30 pm. Membership $20.00 per year. FREE help / education meetings on the 2nd and 3rd Tuesday of each month at Progressive Savings 19900 Beach Blvd., Huntington Beach, 7:15 pm. Our huge library contains the best of Public Domain software for all the Mac family. For further info, call Robert at (714) 840-1238 or mail to 17661 Falkirk Lane, Huntington Beach, CA 92649.

Rockwell International Macintosh Users' Group (RIMUG). Meets 1st Tuesday of each month 12 noon at 2770 E. Carson St., Lakewood, CA. Al Nercessian, president. 8511 Beverly Pk. Pl., Pico Rivera, CA 90660. (213) 420-4819.

MORROW

West LA Morrow User's Group /The Morrow Minority. 40 dedicated members, with special emphasis in WP; PD library. No dues, but $1 at door to pay for refreshments. Some classes and informal newsletter. If new, call to reserve space: Dr. Bernice Ennis, (213) 276-9096, 1833 Franklin Canyon Dr., Beverly Hills, CA. Meetings 2nd Wednesday of the month.

LA Morrow User Group. Meets 3rd Thursday each month, North Hollywood Recreation Center, 11430 Chandler Blvd., North Hollywood. Contact Jack Byers, (818) 347-7283 for information.

NEC

Orange County NEC Users Group (OCNUG). Dedicated to NEC-APC computers, CP/M-86 & MS-DOS. Always room for any experience level. Meets 3 pm, third Saturday of the month. 6642 Lenore, Garden Grove. CA 92645. Call John Bingel at (714) 897-7656 for more info.

The Los Angeles Area NEC APC Users Group meets on the first Saturday of each month at 3 pm at the I/O Interface Computer Mart, 6241 West 89th St., Los Angeles, CA 90045. Telephone (213) 410-9824. There is no meeting in January, and occasionally a meeting may be cancelled or postponed, so it is best to call before coming.

OLIVETTI

Olivetti PC User Group forming. Send SASE to Stan Cory, 29500 Heathercliff Rd. #86, Malibu, CA 90265, or call (213) 457-3879.

OMNIS 3

Omnis 3 User Group. Meets every third Wednesday of the month at Grant St. Elementary School in the auditorium. Address is 2368 Pearl St., Santa Monica. Time is 7:30 pm. The use of Omnis3 and Omnis 3+ in data processing information management systems is covered, from setup to advanced features. Expert and novice welcome. Call Zachary Sempers at (818) 701-1355 for information.

OPEN SYSTEMS ACCOUNTING

OSAS User Group. New group being formed for CPA's, consultants, and other business people who use Open Systems Accounting software to promote a better understanding and more efficient use of OSAS software. Subjects covered will include use of DOS, general accounting and the general use of software and hardware, e.g. networks. Call (213) 452-1335 for information.

OSBORNE

TUG-NET Kaypro and Osborne SIG meets 4th Thursdays, 7 pm, Central Savings, 4464 Van Nuys Blvd., Sherman Oaks. BBS (818) 882-6045, 8-N-1, 1200 baud, 24 hours.

Osborne Komputer Owners Klub (OKOK) is a microcomputer user group serving a variety of computers: Osborne, Kaypro, Commodore C128, IBM and clones. As an affiliate of FOG, we serve both MS-DOS and CP/M operating systems. We offer monthly meetings, classes, public domain software library, electronic bulletin board and special purchase opportunities. Meetings third Wednesday of the month, 7:00–10:00 pm. Meetings held at the Altadena Public Library, 600 E. Mariposa, Altadena, CA. Contact Lionel Soracco, (818) 794-3243, or write OKOK, P.O. Box 40429, Pasadena, CA 91104.

Osborne National Users Group meets 2nd Fri./mo. at 7:30 pm at Wizard of Oz, 20630 Lassen St., Chatsworth, CA 91311. Contact Art Schlefstein, (818) 709-6969.

PARADOX

Southern California Paradox Users Group. Anyone with an interest in the relational database Paradox please send an SASE to Brian Smith, 350 Palos Verdes Blvd., Redondo Beach, CA 90277. Meetings are being held in LA and Orange County.

RADIO SHACK TRS

South Bay Color Computer Club TRS-80, TDP-100, Dragon. Meets third Friday of the month at Mercury Savings, 22939 Hawthorne Blvd., Torrance. Info: Andrew Corlett, 1435 W. 172nd St., Gardena, CA 90247. (213) 538-8394.

OCTUG-Orange County TRS-80 Users Group. Meets the 3rd Sunday of each month in the community room at "The City Shopping Center" in Orange. The room is near the green entrance of the mall (N.E. corner). MS-DOS SIG (Special Interest Group) begins at 11:30 am. General meeting begins at 1:30 pm. Devoted to the Tandy line of computers and compatibles. Come on down and see what it's like. For more info, contact Franco Collino, (714) 750-0887.

San Gabriel Valley TRS-80 Users Group. Supporting users of TRS-80 and Tandy computers. Meets 2nd Friday of each month at Arcadia Park Senior Citizens Center at 7:30 p.m. Monthly newsletter, various SIGs, lotsa fun & info. Contact Dan Dresselhaus. (818) 914-5831 days.

VTUG (Valley TRS-80 User Group). Devoted to users of TRS-80 Model I, II, 4, 4P, LNN or MAX-80. Speakers, presentations, raffle drawing, refreshments. No admission or membership fee, new members welcome. Meetings at Glendale Federal Savings, 7129 Topanga Canyon Blvd., Canoga Park, 3rd Thurs., 7:30 pm. Contact Fred Blechman, (818) 346-7024.

VTHGValley TRS80 Hacker's Group. Programming and problem solving for Models 1, 3, and 4. No vendors, no machines. No dues. No sweat. Bring a blank disk and get NEW public domain software. Meetings 1st Fridays, 7:30 pm, Valley Plaza Park Auditorium, 12240 Archwood St., North Hollywood. Call Eric Bagai at (818) 982-0467 for more information.

Tandy 1000 (The MUG) Meets fourth Wednesdays, 7 pm, 9027 E. Artesia, Bellflower, CA. Contact Dick Sherwood, 4014 Centralia St., Lakewood, 90712, (213) 421-4014. The MUG RBBS (213) 425-0022, members only.

Color America. Radio Shack color Computer SIG meets 2:30-5 pm on the third Saturday of the month at Rosemead Community Center, 3936 N. Muscatel Ave., Rosemead. Contact Mark Randall, 2227 Canyon Rd., Arcadia, CA 91006, (818) 355-6111.

The Los Angeles-Wilshire Color Computer Users' Group, a TRS-80 Color Computer Users' Group, meets the 2nd Saturday of each month, 12:30 pm-5:30 pm in the Felipe de Neve library's community room, 2820 W. 6th, Los Angeles. Call Milton, (213) 558-4909.

United Computer Federation-San Fernando Valley Chapter. Meets the fourth Tuesday of each month at the Tarzana Radio Shack, 18545 Ventura Blvd., 1/2 block west of Reseda Blvd. Meeting starts at 7:30 pm. Meetings are open to the public and all are welcome. The UCF is a network of Tandy Color Computer user groups. For more information phone Pete Ellison, chapter president, at (818) 840-8902.

United Computer Federation-Los Angeles Chapter. Meets the fourth Thursday of each month at the Church of Christ recreational building, corner of Clark and Park streets, just off the 91 freeway in Bellflower. Meeting starts at 7:30 pm. Meetings are open to the public and all are welcome. The UCF is a network of Tandy Color Computer user groups. For more information phone Gary James, chapter president, at (213) 420-7632.

United Computer Federation-Orange County Chapter. Meets the second Sunday of each month at the Mercury Savings building on Edinger Ave., 1 block north of Beach Blvd. in Westminster. Meeting starts at 1:30 pm. Meetings are open to the public and all are welcome. The UCF is a network of Tandy Color Computer user groups. For more information phone Allen Nedrow, chapter president, at (213) 692-3073.

SBT

The Orange County SBT Users Group is being formed and is seeking members who are interested in an atmosphere that promotes the better understanding and more efficient use of the SBT Accounting Software. Contact Jay Rubin, P.O. Box 5145, Newport Beach, CA 92662, (714) 720-8171.

SANYO

Sanyo-MS/DOS Table Top Computers, 14717 South Prairie Ave., Lawndale, CA 90260. (213) 679-1151.

Zenith-Sanyo Users Group meets 10 am every first and third Sunday at 401 S. La Brea Ave., Inglewood, CA 90301. Call Alan Gillen, (213) 674-0318 for information.

Sanyo Users Group of LA (SUGLA). Devoted to users of Sanyo MBC 550/555 micro business computer. Guests welcome. Dues $15/yr. Speakers, presentations, public domain software library, information, new hardware and software reviews. Meetings 2nd Wednesdays, 7 pm, CAL State University, LA, Student Union (Bldg. #5), 4th floor in South Pasadena Room. Contact Fred Blechman, (818) 346-7024.

TEXAS INSTRUMENTS

LA 99er Computer Group. TI 99/4A support, classes and SIGs, large software library, monthly newsletter. Demonstrations, bulk purchase discounts on hardware, software and books. A good group to join. Meetings at Torrance Public Library, 3301 Torrance Blvd. (corner of Madrone), Torrance, CA. 4th Wednesday of the month, 7 pm. Contact Terrie Masters, 148 S. Maple Drive,

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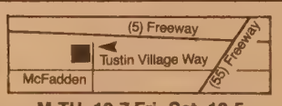

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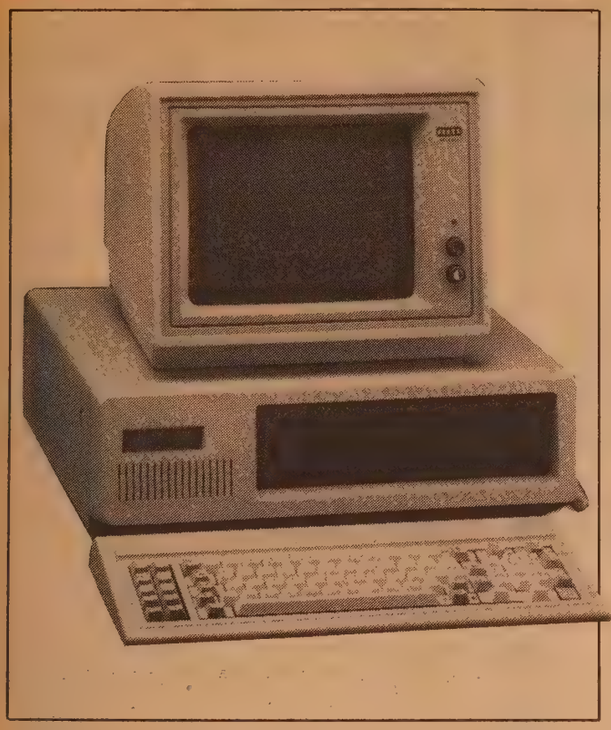

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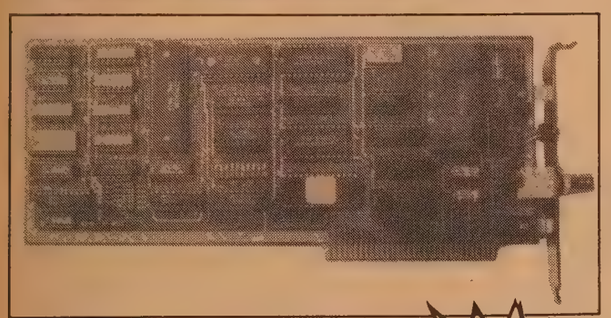

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Irvine, CA 92714
(714) 474-7748

La Habra
329 N. Harbor Blvd.
La Habra, CA 90631
(213) 697-5686

Huntington Beach
18582 Beach Blvd. #8B
Huntington Beach, CA 92648
(714) 964-1108/4438

Beverly Hills, CA 90212, (213) 271-6930.

The TI-99 Club. Yes, there still are a lot of 99's and 99/4a's around. If you own one, then get in touch with these people. They have good info for TI owners. Meetings take place at the Westminster Community Center on the third Thursday of every month at 7:00 pm. For info, call (714) 842-0859.

TI-West (Los Angeles West Side Area). Meets at DeCoursey Engineering Laboratory, 11828 W. Jefferson Blvd., Culver City, on the 3rd Monday of each month. For information, contact Lew Howard at (213)397-9668.

San Gabriel Valley TI 99/4 Users Group meets 1st Wed./mo. at 6:30 pm in the Covina Parkway, West Covina, CA. Contact Tom Padilla, (213) 330-8240.

TI Riverside UG. Supporting the TI 99/4A. Meetings at Collett School, 3rd Thursday, 7 p.m. Contact Ed Butcher, 3523 McKinley St., Riverside, (714) 686-0336.

San Fernando Valley TI 99/4A User Group. Library, Workshops, Newsletter, How To? For further information call Jim Edwards, (818) 248-9558, 5-10 pm. Meetings 2nd Wednesday of the month, 7:30 pm, Doctor's Conference Room, Sherman Oaks Community Hospital, 4929 Van Nuys Blvd.

Antelope Valley TI UG. TI User Group. Meetings at Palmdale Culture Center, 3rd Wed., 7 pm. Contact Len Rouw, 38540 26th St. East, (805) 947-6270.

El Toro 99 Home Computer Users Group. The ET-99 Home Computer User Group meets to demonstrate programs, equipment, and discuss techniques. Contact Ken Baldwin, 23065 Sonoita, Mission Viejo, CA 92641, (714) 855-0480. Meetings at Mercury Savings and Loan, 1-5 and Lake Forest, El Toro, 2nd Saturday of each month 9 am - 12 noon.

Tri-Valley 99'ers. We have what you're looking for! Interesting guest speakers, software/hardware demonstrations, large group library, monthly newsletters. We serve the entire Conejo Valley and beyond! Contact Steve Mehr (805) 496-8725 or Chuck Salvatore, (805) 527-4129 for more information.

BUG (Brea 99er's Users Group). Meets the first Monday of the month at 7:30 pm at the Western Federal Savings meeting room, #10 La Habra Fashion Square, corner Beach and Imperial, in La Habra. For further information call Bob August at (714) 871-3405.

San Fernando Valley Texas Instruments Professional Computer User Group (SFV TI-PRO USER GROUP). Meets at 9017 Reseda Blvd. Suite #212, Northridge, on the 3rd Sunday of each month at 10:00 am. We serve the entire San Fernando and Santa Clara Valleys. Group meets to discuss: how-to techniques, programs, equipment and software. All are welcome —bring a friend. TI-Pro/AutoCAD Users are also welcome. For more info, contact Marcus Swed at (818) 993-3151 during the day and at (818) 366-0886 evenings.

The Pomona Valley 99ers Computer Users Group. Meets locally every month on the second Monday of the month. Anyone interested in home computing is welcome to come to our meetings at 7:00 pm. We meet at the Cortez Elementary School at 12750 Carissa Ave., Chino, which is south of the Pomona Freeway and west of Mountain Ave. There are demos of hardware and software. Mostly for the Texas Instruments 99/4A computer. Lots of discussion. We try to educate and stimulate interest in computer literacy and programming. If you become a member of this non-profit group you'll get a monthly newsletter and be able to get copies of the programs in the large club library of public domain software.

TIMEX-SINCLAIR

Timex-Sinclair. South Bay and West Side groups. Call John W. Petersen at (213) 545-9581 anytime or Dr. George Kuby (213) 201-2014 after 3 pm for more information.

TOMY

Tomy Tutor computer user group. Contact Eugene C. Dinovo, P.O. Box 37, Sepulveda, CA 91343.

VICTOR

West Los Angeles Victor Users Group (WLA-VUG). Victor 9000 users - you are not alone! Meet other users. Free V9000 software & purchasing discounts for members. Victor-specific bulletin board (818) 989-2216. Meetings at 8651 Olin St., LA 90034, 7 pm, 3rd Thursday, every month except December. Contact Roger Goodman, (213) 558-8363.

Orange County Victor 9000 User Group. Meets second Friday of the month at 7:30 pm, Cal State Long Beach, Palo Verde St., Engineering Bldg. #2, Room 304, Long Beach. For information write or call Don Henderson, 9350 Bolsa Ave. #8, Westminster, CA 92683, (714) 894-0073.

WANG

Wang WP Users Group. Meets 4th Thurs. of each odd month, 6 pm. Newsletter, speakers, information network. Call for meeting place: Steven Hirsh, (213) 255-5515, or write 2858 El Roble Drive., Los Angeles 90041.

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ZENITH

Zenith-Sanyo Users Group meets 10 am every first and third Sunday at 401 S. La Brea Ave., Inglewood, CA 90301. Call Alan Gillen, (213) 674-0318 for information.

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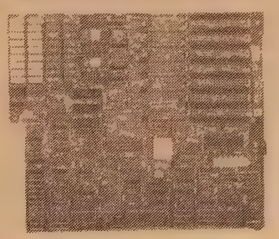

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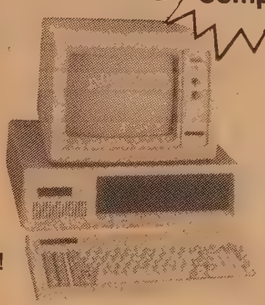

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DVORAK'S LAST COLUMN

Button, Button, Who's Got The Button?

By John C. Dvorak

Another column! About what? Computers? Who needs to listen to some jerk ramble on and on about IBM PCs and Macintoshes month after month? Who cares?

I don't care about this stuff anymore, so don't despair. This column is an experiment. This is all that's possible because on Feb. 14, 1987, all the new ideas were used up. I think it was the *New York Times* that declared it. They were probably wrong by a day or two, but it did happen. The well ran dry. There is nothing more to say about computers. This is my last column, ever.

It's too bad, since things have gone so well until now. Then again, I've gained 20 pounds because of columns like this, and I have this urge to collect those dumb computer buttons that the UNIX hacks wear. No, *I* don't wear them. Well, once in a while. I mean, you've got to face it, some of the buttons *are* funny. I'm amused by the overt sexual innuendo that most of them convey. Have you ever noticed?

Ninety per cent of the computer world is male (at least at the trade shows), so to get any attention, you have to advertise. I can just imagine the great response you'll get from that blonde bombshell when she sees your U.S. Video button that says: "Get Over Laid." Har, har. Get it? Pretty sexy, huh? Let's not forget the classics from TG Products: "Wanna Play With My Joystick?" and "Come Ball With Us." TG also sells track balls. I think wearing these keen buttons while drooling and stuttering will get you that dinner date.

Computerworld started this button phenomenon with its innuendo buttons like "Do You Output?" or "Is Your Brain as Good as Your Baud?" Soon these evolved into buttons bordering on bad taste from bold button makers like 10 Net and it's "Get It Up and Keep It Up with 10 Net." Sure, sure, they're talking about keeping a network up and running. Wink, wink.

Let's not forget the old "Do it . . . " jokes. These are the ones that use the generic phrase opener "do it . . . " and add some sexual innuendo. From the simplistic button from Mercury Computer Systems and its "Do It With Zip" to AT&T's button "I Do It Simultaneously," they are all high schoolish gags for a business filled with 40-year-old teenagers.

So what happens when a guy at a show (or on the street for that matter) sees some knockout gal wearing, say, the Computer Intelligence "I Love Orders" or Blast's "Let's Have A Blast!" button? They choke up and develop a twitch, that's what.

I'm amused by the acceptance of this button phenomenon in a business that is minimally Victorian if not downright prudish. For example, just from this column, the editor will get a slug of letters that all say the same thing: "I read *MicroTimes* to get hard facts. I am offended by Mr. Dvorak's column where he uses the word 'sex' and then discusses prurient buttons that are nothing less than obscene. If I want obscenity then I'll subscribe to *Playboy*. Humph! I will cancel my subscription if this happens again." This is the same guy that will be drooling and tittering at the trade show.

Not all the buttons are funny or sexy. Only the best ones are. Some are pure junk. I've got one that simply says, "I Love Mitsubishi" using the heart to connote the word "love." How dull and uncreative. Then there's a huge green (and obviously expensive) button from ADAGE that says, "It's About Time." Gee, that one has me mesmerized. Talk about dull. If you're going to make a dumb button, then at least keep it small. An example is the smallish "HAL-lelujah!" button from Lotus. Dumb, but small.

Now where was I? Oh, yes. I was discussing the fact that there is nothing more to write about in this business. Perhaps next month I'll go into more detail. For now, I have to put my button collection back. □

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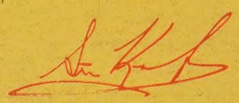

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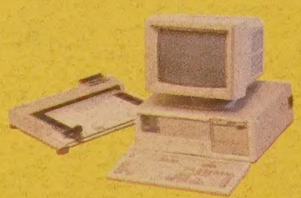

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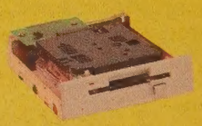

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